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### **SAMPLING PROCEDURES AND TABLES FOR INSPECTION BY ATTRIBUTES**



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DEPARTMENT OF DEFENSE  
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SAMPLING PROCEDURES AND TABLES FOR INSPECTION BY ATTRIBUTES

MIL-STD-105D

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1. This standard has been approved by the Department of Defense and is mandatory for use by the Departments of the Army, the Navy, the Air Force and the Defense Supply Agency. This revision supersedes MIL-STD-105C, dated 18 July 1961.
2. This publication provides sampling procedures and reference tables for use in planning and conducting inspection by attributes. This publication was developed by a working group representing the military services of Canada, the United Kingdom and the United States of America with the assistance and cooperation of American and European organizations for quality control. The international designation of this document is AIC-STD-105. When revision or cancellation of this standard is proposed, the departmental custodians will inform their respective Departmental Standardization Office so that appropriate action may be taken respecting the international agreement concerned.
3. The U.S. Army Munitions Command is designated as preparing activity for this standard. Recommended corrections, additions, or deletions should be addressed to the Commanding Officer, U. S. Army CRR Engineering Office, Attn: SMUCE-ED-S, Army Chemical Center, Maryland.

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# SAMPLING PROCEDURES AND TABLES FOR INSPECTION BY ATTRIBUTES

## 1. SCOPE

**1.1 PURPOSE.** This publication establishes sampling plans and procedures for inspection by attributes. When specified by the responsible authority, this publication shall be referenced in the specification, contract, inspection instructions, or other documents and the provisions set forth herein shall govern. The "responsible authority" shall be designated in one of the above documents.

**1.2 APPLICATION.** Sampling plans designated in this publication are applicable, but not limited, to inspection of the following:

- a. End items.
- b. Components and raw materials.
- c. Operations.
- d. Materials in process.
- e. Supplies in storage.
- f. Maintenance operations.
- g. Data or records.
- h. Administrative procedures.

These plans are intended primarily to be used for a continuing series of lots or batches.

The plans may also be used for the inspection of isolated lots or batches, but, in this latter case, the user is cautioned to consult the operating characteristic curves to find a plan which will yield the desired protection (see 11.6).

**1.3 INSPECTION.** Inspection is the process of measuring, examining, testing, or otherwise comparing the unit of product (see 1.5) with the requirements.

**1.4 INSPECTION BY ATTRIBUTES.** Inspection by attributes is inspection whereby either the unit of product is classified simply as defective or nondefective, or the number of defects in the unit of product is counted, with respect to a given requirement or set of requirements.

**1.5 UNIT OF PRODUCT.** The unit of product is the thing inspected in order to determine its classification as defective or nondefective or to count the number of defects. It may be a single article, a pair, a set, a length, an area, an operation, a volume, a component of an end product, or the end product itself. The unit of product may or may not be the same as the unit of purchase, supply, production, or shipment.

## 2. CLASSIFICATION OF DEFECTS AND DEFECTIVES

### **2.1 METHOD OF CLASSIFYING DEFECTS.**

A classification of defects is the enumeration of possible defects of the unit of product classified according to their seriousness. A defect is any nonconformance of the unit of product with specified requirements. Defects will normally be grouped into one or more of the following classes; however, defects may be grouped into other classes, or into subclasses within these classes.

**2.1.1 CRITICAL DEFECT.** A critical defect is a defect that judgment and experience indicate is likely to result in hazardous or unsafe conditions for individuals using, maintaining, or depending upon the product; or a defect that judgment and experience indicate is likely to prevent performance of the tactical function of a major end item such as a ship, aircraft, tank, missile or space vehicle. NOTE: For a special provision relating to critical defects, see 6.3.

**2.1.2 MAJOR DEFECT.** A major defect is a defect, other than critical, that is likely to result in failure, or to reduce materially the usability of the unit of product for its intended purpose.

**2.1.3 MINOR DEFECT.** A minor defect is a defect that is not likely to reduce materially the usability of the unit of product for its intended purpose, or is a departure from established standards having little bearing on the effective use or operation of the unit.

**2.2 METHOD OF CLASSIFYING DEFECTIVES.** A defective is a unit of product which contains one or more defects. Defectives will usually be classified as follows:

**2.2.1 CRITICAL DEFECTIVE.** A critical defective contains one or more critical defects and may also contain major and/or minor defects. NOTE: For a special provision relating to critical defectives, see 6.3.

**2.2.2 MAJOR DEFECTIVE.** A major defective contains one or more major defects, and may also contain minor defects but contains no critical defect.

**2.2.3 MINOR DEFECTIVE.** A minor defective contains one or more minor defects but contains no critical or major defect.

## 3. PERCENT DEFECTIVE AND DEFECTS PER HUNDRED UNITS

**3.1 EXPRESSION OF NONCONFORMANCE.** The extent of nonconformance of product shall be expressed either in terms of percent defective or in terms of defects per hundred units.

**3.2 PERCENT DEFECTIVE.** The percent defective of any given quantity of units of product is one hundred times the number of defective units of product contained therein divided by the total number of units of product, i.e.:

$$\text{Percent defective} = \frac{\text{Number of defectives}}{\text{Number of units inspected}} \times 100$$

**3.3 DEFECTS PER HUNDRED UNITS.** The number of defects per hundred units of any given quantity of units of product is one hundred times the number of defects contained therein (one or more defects being possible in any unit of product) divided by the total number of units of product, i.e.:

$$\text{Defects per hundred units} = \frac{\text{Number of defects}}{\text{Number of units inspected}} \times 100$$

#### 4. ACCEPTABLE QUALITY LEVEL (AQL)

**4.1 USE.** The AQL, together with the Sample Size Code Letter, is used for indexing the sampling plans provided herein.

**4.2 DEFINITION.** The AQL is the maximum percent defective (or the maximum number of defects per hundred units) that, for purposes of sampling inspection, can be considered satisfactory as a process average (see 11.2).

**4.3 NOTE ON THE MEANING OF AQL.** When a consumer designates some specific value of AQL for a certain defect or group of defects, he indicates to the supplier that his (the consumer's) acceptance sampling plan will accept the great majority of the lots or batches that the supplier submits, provided the process average level of percent defective (or defects per hundred units) in these lots or batches be no greater than the designated value of AQL. Thus, the AQL is a designated value of percent defective (or defects per hundred units) that the consumer indicates will be accepted most of the time by the acceptance sampling procedure to be used. The sampling plans provided herein are so arranged that the probability of acceptance at the designated AQL value depends upon the sample size, being generally higher for large samples than for small ones, for a given AQL. The AQL alone does not

describe the protection to the consumer for individual lots or batches but more directly relates to what might be expected from a series of lots or batches, provided the steps indicated in this publication are taken. It is necessary to refer to the operating characteristic curve of the plan, to determine what protection the consumer will have.

**4.4 LIMITATION.** The designation of an AQL shall not imply that the supplier has the right to supply knowingly any defective unit of product.

**4.5 SPECIFYING AQLs.** The AQL to be used will be designated in the contract or by the responsible authority. Different AQLs may be designated for groups of defects considered collectively, or for individual defects. An AQL for a group of defects may be designated in addition to AQLs for individual defects, or subgroups, within that group. AQL values of 10.0 or less may be expressed either in percent defective or in defects per hundred units; those over 10.0 shall be expressed in defects per hundred units only.

**4.6 PREFERRED AQLs.** The values of AQLs given in these tables are known as preferred AQLs. If, for any product, an AQL be designated other than a preferred AQL, these tables are not applicable.

#### 5. SUBMISSION OF PRODUCT

**5.1 LOT OR BATCH.** The term lot or batch shall mean "inspection lot" or "inspection batch," i.e., a collection of units of product from which a sample is to be drawn and inspected to determine conformance with the acceptability criteria, and may differ from a collection of units designated as a lot or batch

for other purposes (e.g., production, shipment, etc.).

**5.2 FORMATION OF LOTS OR BATCHES.** The product shall be assembled into identifiable lots, sublots, batches, or in such other manner as may be prescribed (see 5.4). Each lot or batch shall, as far as is practicable,

## 5. SUBMISSION OF PRODUCT (Continued)

consist of units of product of a single type, grade, class, size, and composition, manufactured under essentially the same conditions, and at essentially the same time.

**5.3 LOT OR BATCH SIZE.** The lot or batch size is the number of units of product in a lot or batch.

**5.4 PRESENTATION OF LOTS OR BATCHES.** The formation of the lots or

batches, lot or batch size, and the manner in which each lot or batch is to be presented and identified by the supplier shall be designated or approved by the responsible authority. As necessary, the supplier shall provide adequate and suitable storage space for each lot or batch, equipment needed for proper identification and presentation, and personnel for all handling of product required for drawing of samples.

## 6. ACCEPTANCE AND REJECTION

**6.1 ACCEPTABILITY OF LOTS OR BATCHES.** Acceptability of a lot or batch will be determined by the use of a sampling plan or plans associated with the designated AQL or AQLs.

**6.2 DEFECTIVE UNITS.** The right is reserved to reject any unit of product found defective during inspection whether that unit of product forms part of a sample or not, and whether the lot or batch as a whole is accepted or rejected. Rejected units may be repaired or corrected and resubmitted for inspection with the approval of, and in the manner specified by, the responsible authority.

**6.3 SPECIAL RESERVATION FOR CRITICAL DEFECTS.** The supplier may be required at the discretion of the responsible authority to inspect every unit of the lot or batch for

critical defects. The right is reserved to inspect every unit submitted by the supplier for critical defects, and to reject the lot or batch immediately, when a critical defect is found. The right is reserved also to sample, for critical defects, every lot or batch submitted by the supplier and to reject any lot or batch if a sample drawn therefrom is found to contain one or more critical defects.

**6.4 RESUBMITTED LOTS OR BATCHES.** Lots or batches found unacceptable shall be resubmitted for reinspection only after all units are re-examined or retested and all defective units are removed or defects corrected. The responsible authority shall determine whether normal or tightened inspection shall be used, and whether reinspection shall include all types or classes of defects or for the particular types or classes of defects which caused initial rejection.

## 7. DRAWING OF SAMPLES

**7.1 SAMPLE.** A sample consists of one or more units of product drawn from a lot or batch, the units of the sample being selected at random without regard to their quality. The number of units of product in the sample is the sample size.

**7.2 REPRESENTATIVE SAMPLING.** When appropriate, the number of units in the sample shall be selected in proportion to the size of sublots or subbatches, or parts of the lot or batch, identified by some rational criterion.

## 7. DRAWING OF SAMPLES (Continued)

When representative sampling is used, the units from each part of the lot or batch shall be selected at random.

**7.3 TIME OF SAMPLING.** Samples may be drawn after all the units comprising the lot or batch have been assembled, or sam-

ples may be drawn during assembly of the lot or batch.

### 7.4 DOUBLE OR MULTIPLE SAMPLING.

When double or multiple sampling is to be used, each sample shall be selected over the entire lot or batch.

## 8. NORMAL, TIGHTENED AND REDUCED INSPECTION

**8.1 INITIATION OF INSPECTION.** Normal inspection will be used at the start of inspection unless otherwise directed by the responsible authority.

**8.2 CONTINUATION OF INSPECTION.** Normal, tightened or reduced inspection shall continue unchanged for each class of defects or defectives on successive lots or batches except where the switching procedures given below require change. The switching procedures given below require a change. The switching procedures shall be applied to each class of defects or defectives independently.

### 8.3 SWITCHING PROCEDURES.

**8.3.1 NORMAL TO TIGHTENED.** When normal inspection is in effect, tightened inspection shall be instituted when 2 out of 5 consecutive lots or batches have been rejected on original inspection (i.e., ignoring resubmitted lots or batches for this procedure).

**8.3.2 TIGHTENED TO NORMAL.** When tightened inspection is in effect, normal inspection shall be instituted when 5 consecutive lots or batches have been considered acceptable on original inspection.

**8.3.3 NORMAL TO REDUCED.** When normal inspection is in effect, reduced inspection shall be instituted providing that all of the following conditions are satisfied:

a. The preceding 10 lots or batches (or more, as indicated by the note to Table VIII) have been on normal inspection and none has been rejected on original inspection; and

b. The total number of defectives (or defects) in the samples from the preceding 10 lots or batches (or such other number as was used for condition "a" above) is equal to or less than the applicable number given in Table VIII. If double or multiple sampling is in use, all samples inspected should be included, not "first" samples only; and

c. Production is at a steady rate; and

d. Reduced inspection is considered desirable by the responsible authority.

**8.3.4 REDUCED TO NORMAL.** When reduced inspection is in effect, normal inspection shall be instituted if any of the following occur on original inspection:

a. A lot or batch is rejected; or

b. A lot or batch is considered acceptable under the procedures of 10.1.4; or

c. Production becomes irregular or delayed; or

d. Other conditions warrant that normal inspection shall be instituted.

### 8.4 DISCONTINUATION OF INSPECTION.

In the event that 10 consecutive lots or batches remain on tightened inspection (or such other number as may be designated by the responsible authority), inspection under the provisions of this document should be discontinued pending action to improve the quality of submitted material.

## 9. SAMPLING PLANS

**9.1 SAMPLING PLAN.** A sampling plan indicates the number of units of product from each lot or batch which are to be inspected (sample size or series of sample sizes) and the criteria for determining the acceptability of the lot or batch (acceptance and rejection numbers).

**9.2 INSPECTION LEVEL.** The inspection level determines the relationship between the lot or batch size and the sample size. The inspection level to be used for any particular requirement will be prescribed by the responsible authority. Three inspection levels: I, II, and III, are given in Table I for general use. Unless otherwise specified, Inspection Level II will be used. However, Inspection Level I may be specified when less discrimination is needed, or Level III may be specified for greater discrimination. Four additional special levels: S-1, S-2, S-3 and S-4, are given in the same table and may be used where relatively small sample sizes are necessary and large sampling risks can or must be tolerated.

NOTE: In the designation of inspection levels S-1 to S-4, care must be exercised to avoid AQLs inconsistent with these inspection levels.

**9.3 CODE LETTERS.** Sample sizes are designated by code letters. Table I shall be used to find the applicable code letter for the particular lot or batch size and the prescribed inspection level.

**9.4 OBTAINING SAMPLING PLAN.** The AQL and the code letter shall be used to obtain the sampling plan from Tables II, III or IV. When no sampling plan is available for a given combination of AQL and code letter, the tables direct the user to a different letter. The sample size to be used is given by the new code letter not by the original letter. If this procedure leads to different sample sizes for different classes of defects, the code letter corresponding to the largest sample size derived may be used for all classes of defects when designated or approved by the responsible authority. As an alternative to a single sampling plan with an acceptance number of 0, the plan with an acceptance number of 1 with its correspondingly larger sample size for a designated AQL (where available), may be used when designated or approved by the responsible authority.

**9.5 TYPES OF SAMPLING PLANS.** Three types of sampling plans: Single, Double and Multiple, are given in Tables II, III and IV, respectively. When several types of plans are available for a given AQL and code letter, any one may be used. A decision as to type of plan, either single, double, or multiple, when available for a given AQL and code letter, will usually be based upon the comparison between the administrative difficulty and the average sample sizes of the available plans. The average sample size of multiple plans is less than for double (except in the case corresponding to single acceptance number 1) and both of these are always less than a single sample size. Usually the administrative difficulty for single sampling and the cost per unit of the sample are less than for double or multiple.

## 10. DETERMINATION OF ACCEPTABILITY

### **10.1 PERCENT DEFECTIVE INSPECTION.**

To determine acceptability of a lot or batch under percent defective inspection, the applicable sampling plan shall be used in accordance with 10.1.1, 10.1.2, 10.1.3, 10.1.4, and 10.1.5.

**10.1.1 SINGLE SAMPLING PLAN.** The number of sample units inspected shall be equal to the sample size given by the plan. If the number of defectives found in the sample is equal to or less than the acceptance number, the lot or batch shall be considered acceptable. If the number of defectives is equal to or greater than the rejection number, the lot or batch shall be rejected.

**10.1.2 DOUBLE SAMPLING PLAN.** The number of sample units inspected shall be equal to the first sample size given by the plan. If the number of defectives found in the first sample is equal to or less than the first acceptance number, the lot or batch shall be considered acceptable. If the number of defectives found in the first sample is equal to or greater than the first rejection number, the lot or batch shall be rejected. If the number of defectives found in the first sample is between the first acceptance and rejection numbers, a second sample of the size given by the plan shall be inspected. The

number of defectives found in the first and second samples shall be accumulated. If the cumulative number of defectives is equal to or less than the second acceptance number, the lot or batch shall be considered acceptable. If the cumulative number of defectives is equal to or greater than the second rejection number, the lot or batch shall be rejected.

**10.1.3 MULTIPLE SAMPLE PLAN.** Under multiple sampling, the procedure shall be similar to that specified in 10.1.2, except that the number of successive samples required to reach a decision may be more than two.

**10.1.4 SPECIAL PROCEDURE FOR REDUCED INSPECTION.** Under reduced inspection, the sampling procedure may terminate without either acceptance or rejection criteria having been met. In these circumstances, the lot or batch will be considered acceptable, but normal inspection will be reinstated starting with the next lot or batch (see 8.3.4 (b)).

**10.2 DEFECTS PER HUNDRED UNITS INSPECTION.** To determine the acceptability of a lot or batch under Defects per Hundred Units inspection, the procedure specified for Percent Defective inspection above shall be used, except that the word "defects" shall be substituted for "defectives."

## 11. SUPPLEMENTARY INFORMATION

**11.1 OPERATING CHARACTERISTIC CURVES.** The operating characteristic curves for normal inspection, shown in Table X (pages 30-62), indicate the percentage of lots or batches which may be expected to be accepted under the various sampling plans for a given process quality. The curves shown are for single sampling; curves for double

and multiple sampling are matched as closely as practicable. The O. C. curves shown for AQLs greater than 10.0 are based on the Poisson distribution and are applicable for defects per hundred units inspection; those for AQLs of 10.0 or less and sample sizes of 80 or less are based on the binomial distribution and are applicable for percent defec-

## 11. SUPPLEMENTARY INFORMATION (Continued)

tive inspection; those for AQLs of 10.0 or less and sample sizes larger than 80 are based on the Poisson distribution and are applicable either for defects per hundred units inspection, or for percent defective inspection (the Poisson distribution being an adequate approximation to the binomial distribution under these conditions). Tabulated values, corresponding to selected values of probabilities of acceptance ( $P_a$ , in percent) are given for each of the curves shown, and, in addition, for tightened inspection, and for defects per hundred units for AQLs of 10.0 or less and sample sizes of 80 or less.

**11.2 PROCESS AVERAGE.** The process average is the average percent defective or average number of defects per hundred units (whichever is applicable) of product submitted by the supplier for original inspection. Original inspection is the first inspection of a particular quantity of product as distinguished from the inspection of product which has been resubmitted after prior rejection.

**11.3 AVERAGE OUTGOING QUALITY (AOQ).** The AOQ is the average quality of outgoing product including all accepted lots or batches, plus all rejected lots or batches after the rejected lots or batches have been effectively 100 percent inspected and all defectives replaced by nondefectives.

**11.4 AVERAGE OUTGOING QUALITY LIMIT (AOQL).** The AOQL is the maximum of the AOQs for all possible incoming qualities for a given acceptance sampling plan. AOQL values are given in Table V-A for each of the single sampling plans for normal inspection and in Table V-B for each of the single sampling plans for tightened inspection.

**11.5 AVERAGE SAMPLE SIZE CURVES.** Average sample size curves for double and multiple sampling are in Table IX. These show the average sample sizes which may be expected to occur under the various sampling plans for a given process quality. The curves assume no curtailment of inspection and are approximate to the extent that they are based upon the Poisson distribution, and that the sample sizes for double and multiple sampling are assumed to be  $0.631n$  and  $0.25n$  respectively, where  $n$  is the equivalent single sample size.

**11.6 LIMITING QUALITY PROTECTION.** The sampling plans and associated procedures given in this publication were designed for use where the units of product are produced in a continuing series of lots or batches over a period of time. However, if the lot or batch is of an isolated nature, it is desirable to limit the selection of sampling plans to those, associated with a designated AQL value, that provide not less than a specified limiting quality protection. Sampling plans for this purpose can be selected by choosing a Limiting Quality (LQ) and a consumer's risk to be associated with it. Tables VI and VII give values of LQ for the commonly used consumer's risks of 10 percent and 5 percent respectively. If a different value of consumer's risk is required, the O.C. curves and their tabulated values may be used. The concept of LQ may also be useful in specifying the AQL and Inspection Levels for a series of lots or batches, thus fixing minimum sample size where there is some reason for avoiding (with more than a given consumer's risk) more than a limiting proportion of defectives (or defects) in any single lot or batch.

**TABLE I—Sample size code letters**

(See 9.2 and 9.3)

Lot or batch size	Special inspection levels				General inspection levels					
	S-1	S-2	S-3	S-4	1	II	III	IV	V	VI
2	to 8	A	A	A	A	A	A	B	B	B
9	to 15	A	A	A	A	A	A	C	C	C
16	to 25	A	A	B	B	B	B	D	D	D
26	to 50	A	B	B	C	C	C	E	F	E
51	to 90	B	B	C	C	C	E	F	F	F
91	to 150	B	B	C	D	D	E	F	G	G
151	to 280	B	C	D	E	E	G	H	J	H
281	to 500	B	C	D	E	F	F	H	J	J
501	to 1200	C	C	E	F	F	G	K	K	K
1201	to 3200	C	D	E	G	G	H	L	M	L
3201	to 10000	C	D	F	G	G	J	M	N	M
10001	to 35000	C	D	F	H	K	K	N	P	N
35001	to 150000	D	E	G	J	J	K	P	Q	P
150001 and over	500000	D	E	G	J	J	K	Q	R	Q

**TABLE II-A—Single sampling plans for normal inspection (Master table)**

(See 9.4 and 9.5)

		Acceptable Quality Levels (normal inspection)																									
Sample size	Sample code letter	0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000
Ac	Rp	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re
A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
B	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
C	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
D	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
E	13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
F	20	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
G	32	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	50	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
I	80	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
K	125	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
L	200	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
M	315	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N	500	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
P	800	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Q	1250	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
R	2000	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

- ↑ Use first sampling plan below arrow. If sample size equals, or exceeds, lot or batch size, do 100 percent inspection.
- ↓ Use first sampling plan above arrow.
- Ac Acceptance number.
- Re Rejection number.

**TABLE II-B—Single sampling plans for tightened inspection (Master table)**

(See 9.4 and 9.5)

Sample size letter	Sample size	Acceptable Quality Levels (tightened inspection)																										
		0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000	
Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	
A	2																											
B	3																											
C	5																											
D	6																											
E	13																											
F	20																											
G	32																											
H	50																											
J	80																											
K	125																											
L	200																											
M	315																											
N	500																											
P	800																											
Q	1250																											
R	2000	0	1																									
S	3150																											

⇒ Use first sampling plan below arrow. If sample size equals or exceeds lot or batch size, do 100 percent inspection.

⇒ Use first sampling plan above arrow.

Ac = Acceptance number.

Re = Rejection number.

**TABLE II-C—Single sampling plans for reduced inspection (Master table)**

(See 9.4 and 9.5)

		Acceptable Quality Levels (reduced inspection)†																										
Sample size code letter	Sample size	0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000	
Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	
A	2																											
B	2																											
C	2																											
D	3																											
E	5																											
F	8																											
G	13																											
H	20																											
J	32																											
K	50																											
L	80																											
M	125																											
N	200																											
P	315																											
Q	500	0	1																									
R	800																											

- ↑ Use first sampling plan below arrow.  
 ↓ Use first sampling plan above arrow.  
 Ac = Acceptance number.  
 Re = Rejection number.  
 If the acceptance number has been reached, but the rejection number has not been reached, accept the lot, but reinstate normal inspection (see 10.1.4).

## SINGLE REDUCED

**TABLE III-A—Double sampling plans for normal inspection (Master table)**

(See 9.4 and 9.5)

		Acceptable Quality Levels (normal inspection)																												
Sample size code letter	Sample size	Cumulative sample size	0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000		
Ac	Re	Ac	He	Ac	He	Ac	He	Ac	He	Ac	He	Ac	He	Ac	He	Ac	He	Ac	He	Ac	He	Ac	He	Ac	Re	Ac	Re	Ac	He	Ac
A																														
B	First	2	2																											
B	Second	2	4																											
C	First	3	3																											
C	Second	3	6																											
D	First	5	5																											
D	Second	5	10																											
E	First	8	8																											
E	Second	8	16																											
F	First	13	13																											
F	Second	13	26																											
G	First	20	20																											
G	Second	20	40																											
H	First	32	32																											
H	Second	32	64																											
I	First	50	50																											
I	Second	50	100																											
K	First	80	80																											
K	Second	80	160																											
L	First	125	125																											
L	Second	125	250																											
M	First	200	200																											
M	Second	200	400																											
N	First	315	315																											
N	Second	315	630																											
P	First	500	500																											
P	Second	500	1000																											
Q	First	800	800	*																										
Q	Second	800	1600	*																										
R	First	1250	1250	*																										
R	Second	1250	2500	*																										

- Use first sampling plan before arrow. If sample size equals or exceeds lot or batch size, do 100 percent inspection.
- ← Use first sampling plan above arrow.
- Ac = Acceptance number
- Re = Rejection number
- Use corresponding single sampling plan (or alternatively, use double sampling plan below, where available).

**TABLE III-B—Double sampling plans for tightened inspection (Master table)**

(See 9.4 and 9.5)

				Acceptable quality levels (tightened inspection)																									
Sample size ratio	Sample size	Cumulative sample size	0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	225	450	675	1000	
1																													
11	First	2	2																										
11	Second	2	4																										
1	First	3	3																										
1	Second	3	6																										
11	First	5	5																										
11	Second	5	10																										
1	First	8	8																										
1	Second	8	16																										
1	First	11	13																										
1	Second	13	26																										
1	First	20	20																										
1	Second	20	40																										
11	First	12	12																										
11	Second	12	24																										
1	First	50	50																										
1	Second	50	100																										
K	First	80	80																										
K	Second	80	160																										
1	First	125	125																										
1	Second	125	250																										
1	First	200	200																										
1	Second	200	400																										
1	First	115	115																										
1	Second	115	230																										
11	First	500	500																										
11	Second	500	1000																										
1	First	600	600																										
1	Second	600	1200																										
11	First	1250	1250																										
11	Second	1250	2500																										
1	First	2000	2000																										
1	Second	2000	4000																										

→ The first sampling plan below arrow   If sample size equals or exceeds lot size, in 100 percent inspection

← The first sampling plan above arrow

Ac = Acceptance number

Hc = Rejection number

• = The corresponding single sampling plan (or, alternatively, use double sampling plan below, where available)

**DOUBLE  
TIGHTENED**

**TABLE III-C—Double sampling plans for reduced inspection (Master table)**  
(See 9.4 and 9.5)

			Acceptable Quality Levels (reduced inspection) <sup>†</sup>																											
Sample size ratio letter	Sample size	Cus- mative sample size	0	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000		
			Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re		
A																														
	B																													
C																														
	D																													
D	First	2	2																											
	Second	2	4																											
F	Firm	3	3																											
	Second	3	6																											
F	Firm	5	5																											
	Second	5	10																											
G	Firm	6	6																											
	Second	6	16																											
H	Firm	13	13																											
	Second	13	26																											
I	First	20	20																											
	Second	20	40																											
K	Firm	32	32																											
	Second	32	64																											
L	First	50	50																											
	Second	50	100																											
N	First	80	80																											
	Second	80	160																											
N	First	125	125																											
	Second	125	250																											
P	First	200	200																											
	Second	200	400																											
Q	First	315	315																											
	Second	315	630																											
R	First	500	500																											
	Second	500	1000																											

- Use first sampling plan before minor. If sample size equals or exceeds lot size, do 100 percent inspection.
- Use first sampling plan above minor.
- Acceptance number.
- Rejection number.
- Use corresponding plan (or alternatively, use double sampling plan below, where available.)
- If the acceptance number has been exceeded, accept the lot, but reduce next inspection (see 10.14).

TABLE IV-A—Multiple sampling plans for normal inspection (Master table)

(See 9.4 and 9.5)

		Acceptable quality levels (normal inspection)																				
Sample size factor	Sample size	Consecutive sample sizes	0.010	0.015	0.025	0.030	0.040	0.050	0.060	0.070	0.080	0.090	0.100	0.150	0.200	0.250	0.300	0.400	0.500	0.600	1.000	
1	1	First	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	2	Second	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
	3	Third	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
	4	Fourth	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
	5	Fifth	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
	6	Sixth	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	
	7	Seventh	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
4	1	First	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	2	Second	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	3	Third	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	4	Fourth	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
	5	Fifth	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
	6	Sixth	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
+/-	5	First	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	6	Second	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	7	Third	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	8	Fourth	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
	9	Fifth	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
	10	Sixth	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
	11	Seventh	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
C	8	First	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	16	Second	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
	24	Third	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
	32	Fourth	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
	40	Fifth	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	48	Sixth	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
	56	Seventh	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
-/+	11	First	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
	26	Second	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
	52	Third	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
	56	Fourth	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
	62	Fifth	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62
	68	Sixth	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68
	76	Seventh	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76
-/-	11	First	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
	26	Second	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
	52	Third	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
	68	Fourth	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68
	84	Fifth	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84
	96	Sixth	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96
	112	Seventh	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112
-/-	11	First	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
	26	Second	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
	52	Third	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
	68	Fourth	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68
	84	Fifth	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84
	100	Sixth	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	116	Seventh	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116

- Use first sampling plan below or refer to combination of table on following page, when necessary). If sample size equals or exceeds lot or batch size, do 100 percent inspection.
- Use first sampling plan above arrow.
- Acceptance number.
- Acceptance number.
- Use corresponding single sampling plan alternatively, use multiple sampling plan below, where available).
- Use corresponding double sampling plan for alternatively, use multiple sampling plan below, where available).
- Acceptance set presented on this sample size.
- Acceptance set presented on this sample size.

**TABLE IV-A—Multiple sampling plans for normal inspection (Master table)**  
**(Continued)**

(See 9.4 and 9.5.)

				Acceptable quality levels (normal inspection)																										
Sample size	Sample size	Cumulative sample size	Cumulative sample size	0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000	
Sample size letter	Sample size letter	1r	1t	1r	1t	1r	1t	1r	1t	1r	1t	1r	1t	1r	1t	1r	1t	1r	1t	1r	1t	1r	1t	1r	1t	1r	1t	1r	1t	
k	First	12	32	*																										
	Second	32	64																											
	Third	32	96																											
	Fourth	128	128																											
	Fifth	160	192																											
	Sixth	12	24																											
-	First	50	100																											
	Second	50	150																											
	Third	50	200																											
	Fourth	50	250																											
	Fifth	50	300																											
	Sixth	50	350																											
m	First	80	80	*																										
	Second	80	160																											
	Third	80	240																											
	Fourth	80	320																											
	Fifth	80	400																											
	Sixth	80	480																											
	Seventh	80	560																											
v	First	125	125	*																										
	Second	125	250																											
	Third	125	375																											
	Fourth	125	500																											
	Fifth	125	625																											
	Sixth	125	750																											
	Seventh	125	875																											
v'	First	200	200	*																										
	Second	200	400																											
	Third	200	600																											
	Fourth	200	800																											
	Fifth	200	1200																											
	Sixth	200	1400																											
	Seventh	200	1600																											
c	First	315	315	*																										
	Second	315	630																											
	Third	315	945																											
	Fourth	315	1260																											
	Fifth	315	1575																											
	Sixth	315	1890																											
	Seventh	315	2205																											
n	First	500	500	*																										
	Second	500	1000																											
	Third	500	1500																											
	Fourth	500	2000																											
	Fifth	500	2500																											
	Sixth	500	3000																											
	Seventh	500	3500																											

\* Use first sampling plan below arrow. If sample size equals or exceeds lot or batch size, do 100 percent inspection.  
 \*\* Acceptance number.  
 \*\*\* Rejection number.  
 \*\*\*\* Use corresponding single sampling plan (or alternatively, one multiple plan below, where available).  
 \*\*\*\*\* Acceptance number permitted at this sample size.





**TABLE IV-C—Multiple sampling plans for reduced inspection (Master table)**

(See 9.4 and 9.5)

		Acceptable quality levels (reduced inspection) †																												
Sample size code letter	Sample size	Code initial sample size	0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000		
Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re			
A																														
B																														
C																														
D																														
E																														
F	First	2																												
	Second	2																												
	Third	2																												
	Fourth	2																												
	Fifth	2																												
	Sixth	2																												
	Seventh	2																												
G	First	3																												
	Second	3																												
	Third	3																												
	Fourth	3																												
	Fifth	3																												
	Sixth	3																												
	Seventh	3																												
H	First*	5																												
	Second	5																												
	Third	5																												
	Fourth	5																												
	Fifth	5																												
	Sixth	5																												
	Seventh	5																												
I	First	6																												
	Second	6																												
	Third	6																												
	Fourth	6																												
	Fifth	6																												
	Sixth	6																												
	Seventh	6																												
K	First	13																												
	Second	13																												
	Third	13																												
	Fourth	13																												
	Fifth	13																												
	Sixth	13																												
	Seventh	13																												

Use first sampling plan below arrow (refer to continuation of table on following page, where necessary). If sample size equals or exceeds lot or batch size, do 100 percent inspection.

Use first sampling plan above arrow.

Use corresponding double sampling plan (or alternatively, use multiple sampling plan below, where available).

Use corresponding single sampling plan (or alternatively, use multiple sampling plan above, where available).

Acceptance number at this sample size.

If, after the final sample, the acceptance number has been exceeded, but the rejection number has not been reached, accept the lot but reinspect normal inspection (see 10.14).

**TABLE IV-C—Multiple sampling plans for reduced inspection (Master table)**  
**(Continued)**

(See 9.4 and 9.5)

Sample size code letter	Sample size	Came- letter sample size	Acceptable Quality Levels (reduced inspection)†																																			
			0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000										
Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re											
I.																																						
First	20	20	•																																			
Second	20	40		•																																		
Third	20	60			•																																	
Fourth	20	80				•																																
Fifth	20	100					•																															
Sixth	20	120						•																														
Seventh	20	140							•																													
M										•																												
First	32	32	64								•																											
Second	32	32	96									•																										
Third	32	128											•																									
Fourth	32	160												•																								
Fifth	32	192													•																							
Sixth	32	224														•																						
N																	•																					
First	50	50	100																•																			
Second	50	150																		•																		
Third	50	200																			•																	
Fourth	50	250																				•																
Fifth	50	300																					•															
Sixth	50	350																						•														
Seventh	50	400																							•													
P																		•																				
First	80	80	160																•																			
Second	80	240																		•																		
Third	80	320																			•																	
Fourth	80	400																			•																	
Fifth	80	480																				•																
Sixth	80	560																					•															
Seventh	80	640																						•														
Y																			•																			
First	125	125	250																	•																		
Second	125	375																			•																	
Third	125	500																				•																
Fourth	125	625																					•															
Fifth	125	750																						•														
Sixth	125	875																							•													
H																				•																		
First	200	200	400																		•																	
Second	200	600																				•																
Third	200	800																					•															
Fourth	200	1000																						•														
Fifth	200	1200																							•													
Sixth	200	1400																								•												
Seventh	200	200																									•											

**MULTIPLE  
REDUCED**

- Use first sampling plan before arrow. If sample size equals, or exceeds, lot or batch size, do 100 percent inspection.
- Use first sampling plan above arrow (refer to preceding page when necessary).
- Acceptance number.
- Rejection number.
- If, after the final sample, the rejection number has been exceeded, but the rejection number has not been reached, accept the lot, but reduce next inspection (see 10.1.4).

**TABLE V.4—Average Outgoing Quality Limit Factors for Normal Inspection (Single sampling)**

(See 11.4)

Code Letter	Sample Size	Acceptable Quality Level																													
		0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000				
A	2																18			42	69	97	160	220	330	470	730	1100			
B	3																12			28	46	65	110	150	220	310	490	720	1100		
C	5																7.4			17	27	39	63	90	130	190	290	430	660		
D	6																4.6			11	17	24	40	56	82	120	180	270	410		
E	13																2.8			4.2	6.5	11	15	24	34	50	72	110	170	250	
F	20																1.8			1.1	1.7	2.4	4.0	5.6	8.2	12	18	23	33	47	73
G	32																1.2			2.6	4.3	6.1	9.9	14	21	29	46				
H	50																0.74			1.7	2.7	3.9	6.3	9.0	13	19	29				
J	80																0.46			1.1	1.7	2.4	4.0	5.6	8.2	12	18				
K	125																0.29			0.67	1.1	1.6	2.5	3.6	5.2	7.5	12				
L	200																0.18			0.42	0.69	0.97	1.6	2.2	3.3	4.7	7.3				
M	315																0.12			0.27	0.44	0.62	1.00	1.4	2.1	3.0	4.7				
N	500																0.074			0.17	0.27	0.39	0.63	0.90	1.3	1.9	2.9				
P	800																0.046			0.11	0.17	0.24	0.40	0.56	0.82	1.2	1.8				
Q	1250	0.029															0.067	0.11	0.16	0.25	0.36	0.52	0.75	1.2							
R	2000																0.042	0.069	0.097	0.16	0.22	0.33	0.47	0.73							

**Notes** For the exact AOQL, the above values must be multiplied by  $(1 - \frac{\text{Sample size}}{\text{Lot or Batch size}})$  ( see 11.4 )

**TABLE V-B—Average Outgoing Quality Limit Factors for Tightened Inspection (Single sampling)**

(See 11.4)

Code Letter	Sample size	Acceptable Quality Level																									
		0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000
A	2																										
B	3																										
C	5																										
D	8																										
E	13																										
F	20																										
G	32																										
H	50																										
J	80																										
K	125																										
L	200																										
M	315																										
N	500																										
P	800																										
Q	1250																										
R	2000	0.018																									
S	3150																										

Note: For the exact AOQL, the above values must be multiplied by  $(1 - \frac{\text{Sample size}}{\text{Lot or Batch size}})$  ( see 11.4 )

**TABLE VI-A—Limiting Quality (in percent defective) for which  $P_a = 10$  Percent  
(for Normal Inspection, Single sampling)**

(See 11.6)

Code letter	Sample size	Acceptable Quality Level															
		0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10
A	2																
B	3																
C	5																
D	8																
E	13																
F	20																
G	32																
H	50																
J	80																
K	125																
L	200																
M	315																
N	500																
P	800																
Q	1250																
R	2000																

**LQ (DEFECTIVES)****10.0%**

**TABLE VI-B—Limiting Quality (in defects per hundred units) for which  $P_a = 10\text{ Percent}$**   
 (for Normal Inspection, Single sampling)

(See 11.6)

Code letter	Sample size	Acceptable Quality Level																													
		0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000				
A	2																120					200	270	330	460	590	770	1000	1400	1900	
B	3																77					130	180	220	310	390	510	670	940	1300	1800
C	5																46					78	110	130	190	240	310	400	560	770	1100
D	8																29					49	67	84	120	150	190	250	350	480	670
E	13																18					30	41	51	71	91	120	160	220	300	410
F	20																12					20	27	33	46	59	77	100	140		
G	32																7.2					12	17	21	29	37	48	63	88		
H	50																4.6					7.8	11	13	19	24	31	40	56		
J	80																2.9					4.9	6.7	8.4	12	15	19	25	35		
K	125																1.8					3.1	4.3	5.4	7.4	9.4	12	16	23		
L	200																1.2					2.0	2.7	3.3	4.6	5.9	7.7	10	14		
M	315																0.73					1.2	1.7	2.1	2.9	3.7	4.9	6.4	9.0		
N	500																0.46					0.78	1.1	1.3	1.9	2.4	3.1	4.0	5.6		
P	800																0.29					0.49	0.67	0.84	1.2	1.5	1.9	2.5	3.5		
Q	1250																0.18					0.31	0.43	0.53	0.74	0.94	1.2	1.6	2.3		
R	2000																				0.20	0.27	0.33	0.46	0.59	0.77	1.0	1.4			

LQ (DEFECTS)  
10%

**TABLE VII-A—Limiting Quality (in percent defective) for which  $P_a = 5$  Percent  
(for Normal Inspection, Single sampling)**

(See 11.6)

Code letter	Sample size	Acceptable Quality Level															
		0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10
A	2																
B	3																
C	5																
D	8																
E	13																
F	20																
G	32																
H	50																
J	80																
K	125																
L	200																
M	315																
N	500																
P	800																
Q	1250																
R	2000																

**LQ (DEFECTIVES)  
5.0%**

**TABLE VII-B—Limiting Quality (in defects per hundred units) for which  $P_d = 5\text{ Percent}$**   
 (for Normal Inspection, Single sampling)

(See 11.6)

Code letter	Sample size	Acceptable Quality Level																														
		0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000					
A	2															150					240	320	390	530	660	850	1100	1500	2000			
B	3															100					160	210	260	350	440	570	730	1000	1400	1900		
C	5															60					95	130	160	210	260	340	440	610	810	1100		
D	8															38					59	79	97	130	160	210	270	380	510	710		
E	13															23					37	48	60	81	100	130	170	230	310	440		
F	20															15					24	32	39	53	66	85	110	150				
G	32															9.4					15	20	24	33	41	53	68	95				
H	50															6.0					9.5	13	16	21	26	34	44	61				
J	80															3.8					5.9	7.9	9.7	13	16	21	27	38				
K	125															2.4					3.8	5.0	6.2	8.4	11	14	18	24				
L	200															1.5					2.4	3.2	3.9	5.3	6.6	8.5	11	15				
M	315															0.95					1.5	2.0	2.5	3.3	4.2	5.4	7.0	9.6				
N	540															0.60					0.95	1.3	1.6	2.1	2.6	3.4	4.4	6.1				
P	800															0.38					0.59	0.79	0.97	1.3	1.6	2.1	2.7	3.8				
Q	1250	0.24														0.38	0.50	0.62	0.84	1.1	1.4	1.8	2.4									
R	2000															0.24	0.32	0.39	0.53	0.66	0.85	1.1	1.5									

LQ (DEFECTS)  
5%

**TABLE VIII—Limit Numbers for Reduced Inspection**

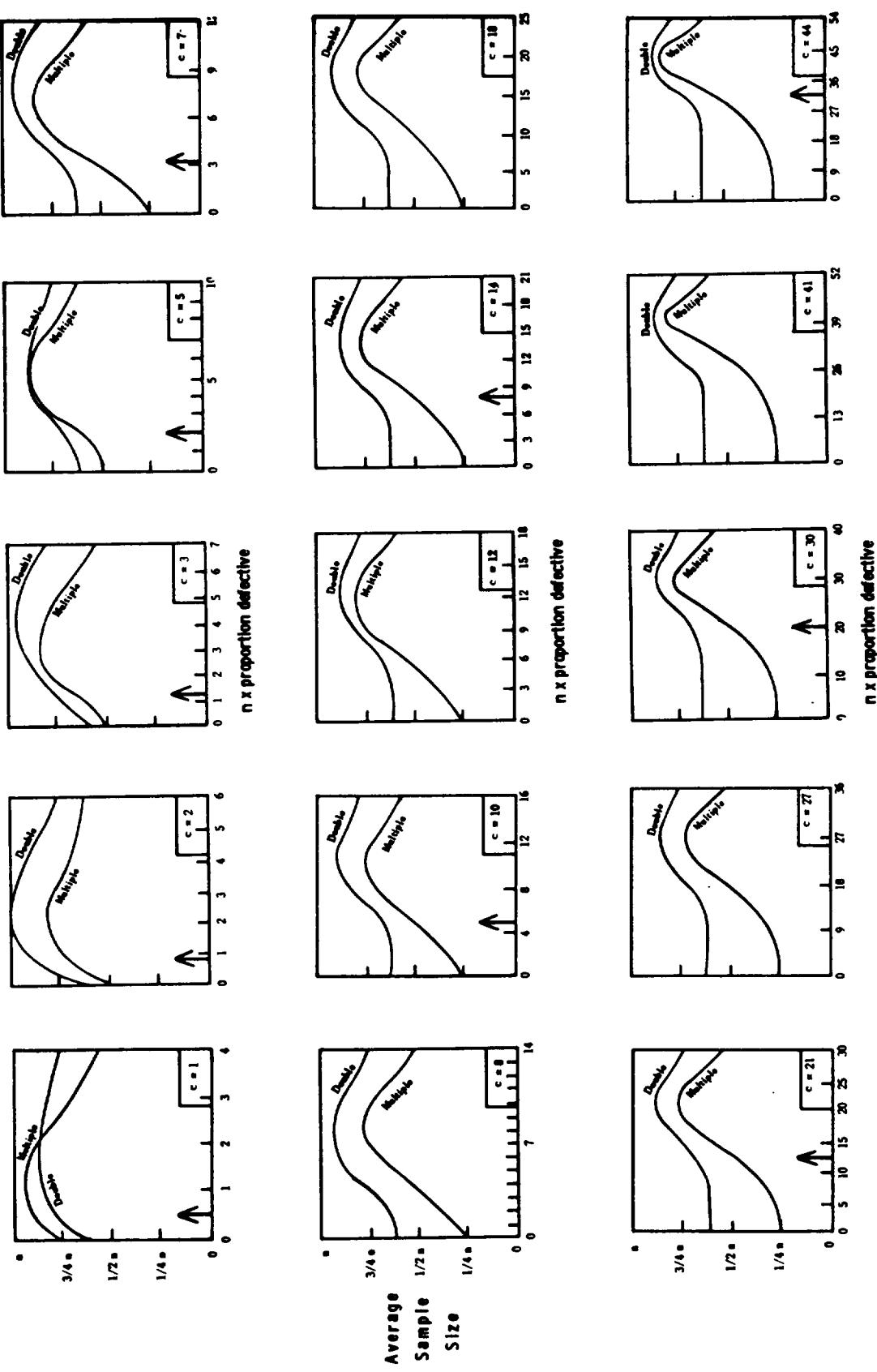
(See 8.3.3)

		Acceptable Quality Level																									
		0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000
Number of sample units from last 10 lots or batches	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		20 - 29	30 - 49	50 - 79	80 - 129	130 - 199	200 - 319	320 - 499	500 - 799	800 - 1249	1250 - 1999	2000 - 3149	3150 - 19999	30000 & Over	...	...	...	...	...	...	...	...	...	...	...	...	...
20 - 29	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30 - 49	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
50 - 79	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
80 - 129	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
130 - 199	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
200 - 319	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
320 - 499	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
500 - 799	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
800 - 1249	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1250 - 1999	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2000 - 3149	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3150 - 19999	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30000 & Over	2	3	7	14	21	35	56	86	121	166	211	261	311	366	421	476	531	586	641	696	751	806	861	916	971	1026	1081

Notes that the number of sample units from the last ten lots or batches is not sufficient for reduced inspection for this AQL. In this instance more than ten lots or batches may be used for the calculation, provided that the lots or batches used are the most recent ones in sequence, that they have all been on normal inspection, and that none has been rejected while on original inspection.

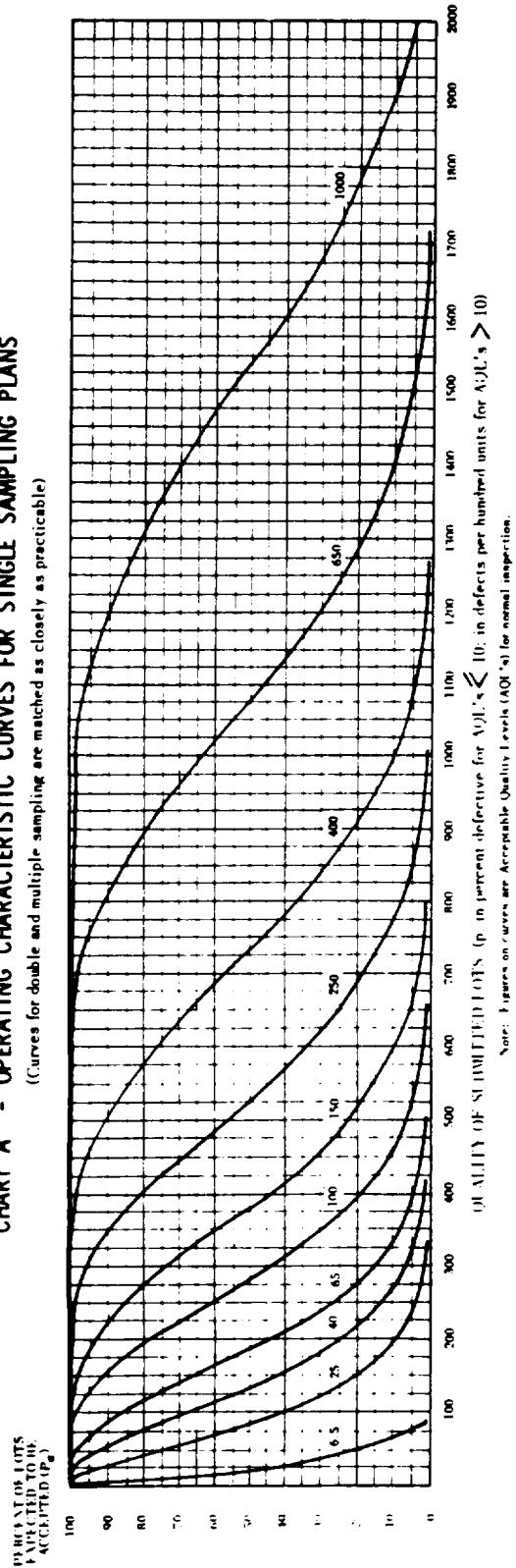
**TABLE IX—Average sample size curves for double and multiple sampling  
(normal and tightened inspection)**

(See 11.5)



• Equivalent single sample size  
 □ Stage 1 sample acceptance number  
 ↓ AOL for normal inspection

**AVERAGE  
SAMPLE SIZE**

**TABLE X-A—Tables for sample size code letter: A****CHART A - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**  
(Curves for double and multiple sampling are matched as closely as practicable)**TABLE X-A-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**

$p_0$	Acceptable Quality Levels (normal inspection)										Acceptable Quality Levels (lightened inspection)											
	$p$ (in defects per hundred units)										$p$ (in defects per hundred units)											
$p$ (in percent defective)	6.5	12.5	25	40	65	100	150	250	400	650	$p$ (in percent defective)	6.5	12.5	25	40	65	100	150	250	400	650	1000
99.0	0.501	0.51	7.45	21.8	41.2	89.2	145	175	239	305	374	517	629	859	977							
95.0	2.53	2.56	17.8	40.9	68.3	131	199	235	308	385	462	622	745	995	1122							
90.0	5.13	5.25	26.6	55.1	87.3	158	233	272	351	432	515	684	812	1073	1206							
75.0	13.4	14.4	48.1	86.8	127	211	298	342	431	521	612	795	934	1314	1354							
50.0	29.3	34.7	83.9	134	184	284	383	433	533	633	733	933	1083	1383	1533							
25.0	50.0	69.3	135	196	256	371	484	540	651	761	870	1087	1248	1568	1728							
10.0	68.4	115	195	266	334	464	589	650	770	889	1006	1238	1409	1748	1916							
5.0	77.6	150	237	315	388	526	657	722	848	972	1094	1334	1512	1862	2035							
1.0	90.0	230	332	420	502	655	800	870	1007	1141	1272	1529	1718	2098	2270							
		X	X	40	65	100	150	X	250	X	400	X	650	X	1000	X						

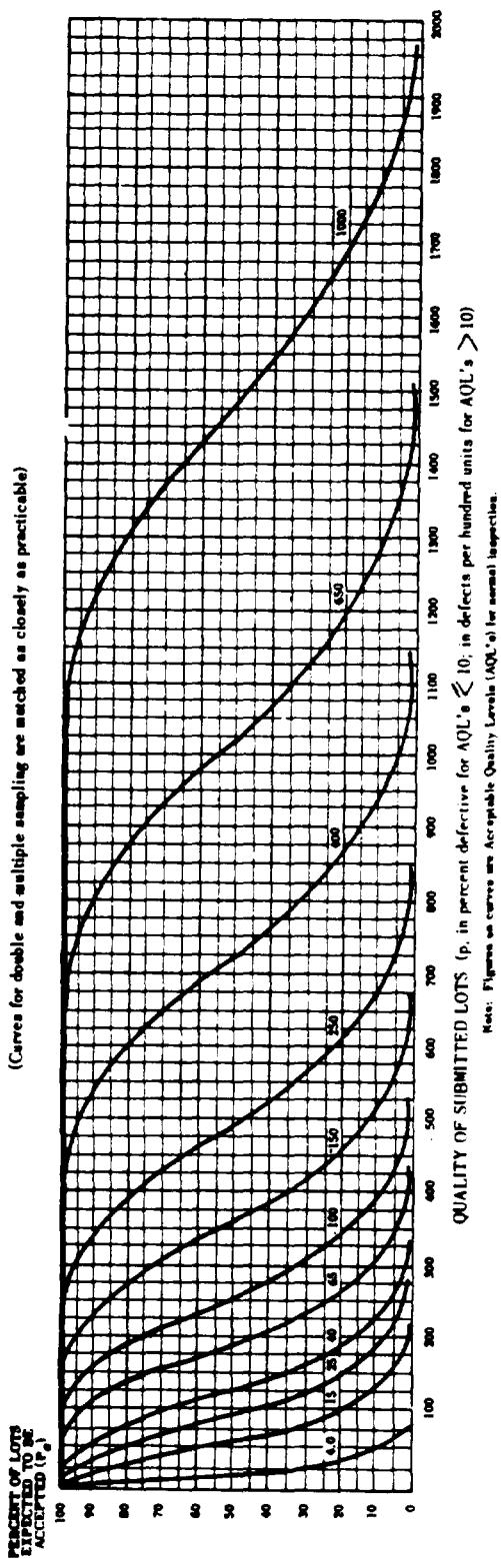
Note: Binomial distribution used for percent defective components. Columns for defects per hundred units.

**TABLE X-A-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: A**

Type of sampling plan	Cumulative sample size	Acceptable Quality Levels (normal inspection)																		Cumulative sample size											
		Less than 6.5	6.5	10	15	25	40	65	100	150	250	400	650	1000	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re			
Single	2	▽	0	1				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	18	19	21	22	27	28	30	31	2
Double		▽	•		Use	Use	Letter	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)			
Multiple				D	C	B																									
				▽	•																										
				Less than 10																											

Acceptable Quality Levels (tightened inspection)

- ▽ = Use next subsequent sample size code letter for which acceptance and rejection numbers are available.  
 Ac = Acceptance number  
 Re = Rejection number  
 • = Use single sampling plan above (or alternatively use letter D).  
 (\*) = Use single sampling (or alternatively use letter B).

**TABLE X-B—Tables for sample size code letter: B****CHART B - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**  
(Curves for double and multiple sampling are matched as closely as practicable)**TABLE X-B-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**

$P_a$	Acceptable Quality Levels (normal inspection)										Acceptable Quality Levels (tightened inspection)									
	4.0	4.0	15	25	40	65	100	150	250	400	650	1000	4.0	4.0	15	25	40	65	100	
$p$ (in percent defective)																				
99.0	0.33	0.34	4.97	14.5	27.4	59.5	96.9	117	159	203	249	345	419	573	651	947	1029			
95.0	1.70	1.71	11.8	27.3	45.5	87.1	133	157	206	256	308	415	496	663	748	1065	1152			
90.0	3.45	3.50	17.7	36.7	58.2	105	155	181	234	288	343	456	541	716	804	1131	1222			
75.0	9.14	9.60	32.0	57.6	84.5	141	199	228	287	347	408	530	623	809	903	1249	1344			
50.0	20.6	23.1	55.9	89.1	122	189	256	289	356	422	489	622	722	922	1022	1369	1489			
25.0	37.0	46.2	89.8	131	170	247	323	360	434	507	580	724	832	1046	1152	1539	1644			
10.0	53.6	76.8	130	177	223	309	392	433	514	593	671	825	939	1165	1277	1683	1793			
5.0	63.2	99.9	159	210	258	350	438	481	565	648	730	890	1008	1241	1356	1773	1886			
1.0	78.4	154	221	280	335	437	533	580	672	761	848	1019	1145	1392	1513	1951	2069			
0.65	6.5	6.5	25	40	65	100	150	250	400	650	1000	X	X	X	X	X	X	X	X	X

Note: Binomial distribution used for percent defective components; Poisson for defects per hundred units.

TABLE X-B-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: B

		Acceptable Quality Levels (normal inspection)															Cumulative sample size																				
Type of sampling plan	Cumulative sample size	Less than 4.0	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000																						
		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re																
Single	3	▽	0	1	Use	Use	Use	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	18	19	21	22	27	28	30	31	41	42	44	45	3		
Double	2	▽	•	Letter	Letter	Letter	0	2	0	3	1	4	2	5	3	7	3	7	5	9	6	10	7	11	9	14	11	16	15	20	17	22	23	29	31	2	
Double	4	▽	•	Letter	Letter	Letter	1	2	3	4	4	5	6	7	8	9	11	12	12	13	15	16	18	19	23	24	26	27	34	35	37	38	52	53	56	57	4
Multiple				A	D	C																															
Multiple				▽	•																																
		Less than 6.5	6.5	10	15	25	40	65	100	150	250	400	650	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

Acceptable Quality Levels (tightened inspection)

▽ = Use next subsequent sample size code letter for which acceptance and rejection numbers are available.  
 Ac = Acceptance number  
 Re = Rejection number

• = Use single sampling plan above (or alternatively use letter E).  
 ++ = Use double sampling plan above (or alternatively use letter D).



TABLE X-C—Tables for sample size code letter: C

**CHART C - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**

(Curves for double and multiple sampling are matched as closely as practicable)

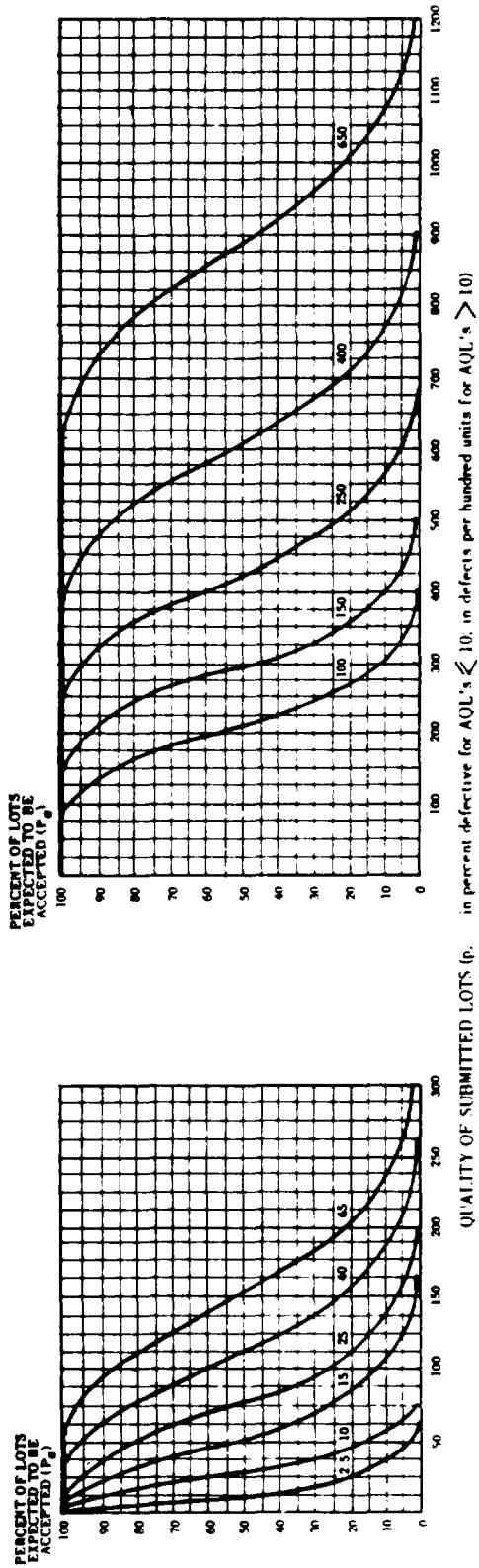


TABLE X-C-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

$n$	Acceptable Quality Levels (normal inspection)										Acceptable Quality Levels (tightened inspection)									
	2.5	10	2.5	10	15	25	40	65	$\times$	100	$\times$	150	$\times$	250	$\times$	400	$\times$	650	$\times$	
$p$ (in percent defective)	p (in defects per hundred units)										p (in defects per hundred units)									
99.0	0.20	3.28	0.20	2.89	8.72	16.5	35.7	58.1	70.1	95.4	122	150	207	251	344	391	568	618		
95.0	1.02	7.63	1.03	7.10	16.4	27.3	52.3	79.6	93.9	123	154	165	249	298	398	449	639	691		
90.0	2.09	11.2	2.10	10.6	22.0	34.9	63.0	93.1	109	140	173	206	273	325	429	482	679	733		
75.0	5.59	19.4	5.76	19.2	34.5	50.7	84.4	119	137	172	208	245	318	374	485	542	749	806		
50.0	12.9	31.4	13.9	33.6	53.5	73.4	113	153	173	214	251	293	373	433	553	613	833	893		
25.0	24.2	45.4	27.7	53.9	78.4	102	148	194	216	260	304	348	435	499	627	691	923	987		
10.0	36.9	58.4	46.1	77.8	106	134	186	235	260	308	356	403	495	564	699	766	1010	1076		
5.0	45.1	65.8	59.9	94.9	126	155	210	263	289	319	389	438	534	605	745	814	1064	1131		
1.0	60.2	77.8	92.1	134	168	201	262	320	348	403	456	509	612	687	835	908	1171	1241		
4.0			4.0	15	25	40	65	$\times$	100	$\times$	150	$\times$	250	$\times$	400	$\times$	650	$\times$		

Acceptable Quality Levels (tightened inspection)

Note: Binomial distribution used for percent defective computation. Formula for defects per hundred units.

TABLE X-C-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: C

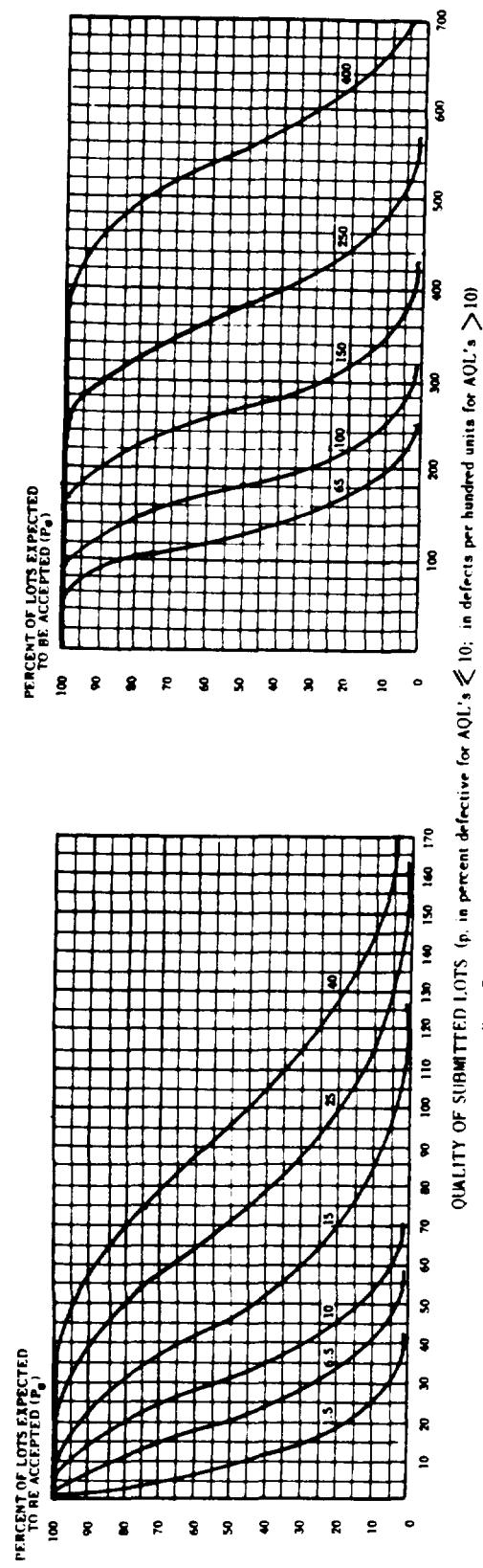
Type of sampling plan	Cumulative sample size	Cumulative sample size																																			
		Less than 2.5	2.5	4.0	X	6.5	10	15	25	40	65	X	100	X	150	X	250	X	400	X	650	1000															
Single	5	▽	0	1	Use	Use	1	2	2	3	4	5	6	7	8	9	10	11	12	13	14	15	18	19	21	22	27	30	31	41	42	44	45	5			
Double	3	▽	*	Letter	Letter	0	2	0	3	1	4	2	5	3	7	5	9	6	10	7	11	9	14	11	16	15	20	17	22	23	29	25	31	3			
Double	6	▽	*	Letter	Letter	1	2	3	4	4	5	6	7	8	9	11	12	12	13	15	16	18	19	23	24	26	27	34	35	37	38	52	53	56	57	Letter	6
Multiple		B E D																		B																	
Multiple		▽ *																		B																	
Multiple		Less than 4.0																		B																	

Acceptable Quality Levels (tightened inspection)

- ▽ = Use next subsequent sample size code letter for which acceptance and rejection numbers are available.
- Ac = Acceptance number.
- Re = Rejection number.
- \* = Use single sampling plan above (or alternatively use letter F).
- ++ = Use double sampling plan above (or alternatively use letter D).
- ++ =

**TABLE X-D—Tables for sample size code letter: D****CHART D - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**

(Curves for double and multiple sampling are matched as closely as practicable)

**TABLE X-D-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**

P <sub>a</sub>	Acceptable Quality Levels (normal inspection)										Acceptable Quality Levels (tightened inspection)									
	1.5	6.5	10	1.5	6.5	10	1.5	6.5	10	1.5	6.5	10	1.5	6.5	10	1.5	6.5	10	1.5	6.5
p (in percent defective)																				
99.0	0.13	2.00	6.00	0.13	1.86	5.45	10.3	22.3	36.3	43.8	59.6	76.2	93.5	129	157	215	244	355	386	
95.0	0.64	2.64	11.1	0.64	4.44	10.2	17.1	32.7	49.8	58.7	77.1	96.1	116	156	186	249	281	399	432	
90.0	1.31	6.88	14.7	1.31	6.65	13.8	21.8	39.4	58.2	67.9	87.8	108	129	171	203	268	301	424	458	
75.0	3.53	12.1	22.1	3.60	12.0	21.6	31.7	52.7	74.5	85.5	108	130	153	199	234	303	339	468	504	
50.0	8.30	20.1	32.1	8.66	21.0	33.4	45.9	70.9	95.9	108	133	158	183	233	271	346	383	521	558	
25.0	15.9	30.3	43.3	17.3	33.7	49.0	63.9	92.8	121	135	163	190	218	272	312	392	432	577	617	
10.0	25.0	40.6	53.9	28.8	48.6	66.5	83.5	116	147	162	193	222	252	309	352	437	478	631	672	
5.0	31.2	47.1	59.9	37.5	59.3	78.7	96.9	131	164	180	212	243	274	334	378	465	509	665	707	
1.0	43.8	58.8	70.7	57.6	83.0	105	126	164	200	218	252	285	318	362	429	522	568	732	776	
2.5	10	X	2.5	10	15	25	40	X	65	X	100	X	150	X	250	X	400	X		

TABLE X-D-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: D

Type of sampling plan		Acceptable Quality Levels (normal inspection)												Cumulative sample size		
		Less than 1.5	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	Higher than 400
Single	8	▽	0	1	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	Use	
Double	5	▽	•	Letter	Letter	0	2	0	3	1	4	2	5	3	7	3
Double	10	▽	•	Letter	Letter	1	2	3	4	4	5	6	7	8	9	11
Multiple	8	▽	•	C	F	E	#	2	#	3	#	4	0	4	0	5
Multiple	4	▽	•				#	2	0	3	1	5	1	6	2	7
Multiple	6	▽	•				#	0	2	0	3	1	4	2	6	3
Multiple	8	▽	•				#	0	3	1	4	2	5	3	7	5
Multiple	10	▽	•				#	1	3	2	4	3	6	5	8	7
Multiple	12	▽	•				#	1	3	3	5	4	6	7	9	10
Multiple	14	▽	•				#	2	3	4	5	6	7	9	10	13
Less than 2.5		2.5	▽	4.0	6.5	10	15	25	40	65	100	150	250	400	Higher than 400	

△ = Use next preceding sample size code letter for which acceptance and rejection numbers are available.

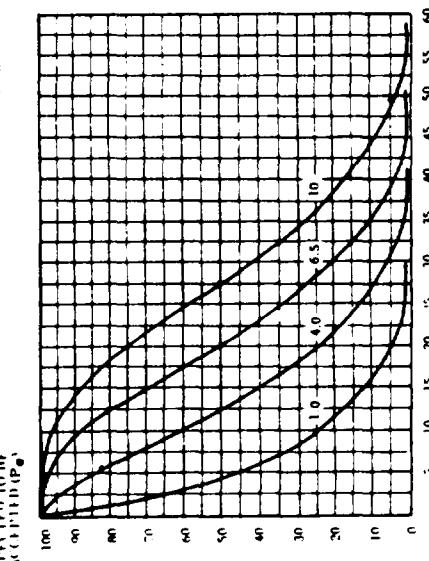
$\nabla$  = Use next subsequent sample size code letter for which acceptance and rejection numbers are available.

### Acceptance number

- Rejection number
- = Use single sampling plan above (or alternatively use letter G).

**TABLE X-E—Tables for sample size code letter: E****CHART E - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**

(Curves for double and multiple sampling are matched as closely as practicable)

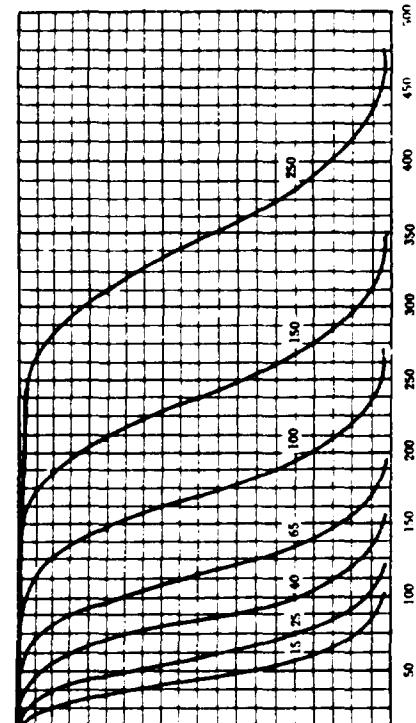


Note: Figures on curves are Acceptable Quality Levels (AQL's) for normal inspection.

**TABLE X-E-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**

P <sub>a</sub>	Acceptable Quality Levels (normal inspection)										Acceptable Quality Levels (tightened inspection)									
	1.0	4.0	6.5	10	1.0	4.0	6.5	10	15	25	40	65	100	150	250					
99.0	0.077	1.19	3.63	7.00	0.078	1.15	3.35	6.33	13.7	22.4	27.0	36.7	46.9	57.5	79.6	96.7	132	150	219	238
95.0	0.394	2.81	6.63	11.3	0.395	2.73	6.29	10.5	20.1	30.6	36.1	47.5	59.2	71.1	95.7	115	153	173	246	266
90.0	0.807	4.16	8.80	14.2	0.808	4.09	8.48	13.4	24.2	35.8	41.8	54.0	66.5	79.2	105	125	165	185	261	282
75.0	2.19	7.41	13.4	19.9	2.22	7.39	13.3	19.5	32.5	45.8	52.6	66.3	80.2	94.1	122	144	187	208	288	310
50.0	5.19	12.6	20.0	27.5	5.33	12.9	20.6	28.2	43.6	59.0	66.7	82.1	97.5	113	144	168	213	236	321	344
25.0	10.1	19.4	28.0	36.2	10.7	20.7	30.2	39.3	57.1	74.5	83.1	100	117	134	167	192	241	266	355	379
10.0	16.2	26.8	36.0	44.4	17.7	29.9	40.9	51.4	71.3	90.5	100	119	137	155	190	217	269	295	388	414
5.0	20.6	31.6	41.0	49.5	23.0	36.5	48.4	59.6	80.9	101	111	130	150	168	205	233	286	313	409	435
1.0	29.8	41.5	50.6	58.7	35.4	51.1	64.7	77.3	101	123	134	155	176	196	235	264	321	349	450	477
0.5	6.5	10	15	25	1.5	6.5	10	15	25	40	65	100	150	250	X	X	X	X	X	X

Note: Binomial distribution used for percent defective computation. Percent for defects per hundred units.



Note: Figures on curves are Acceptable Quality Levels (AQL's) for tightened inspection.

TABLE X-E2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: E

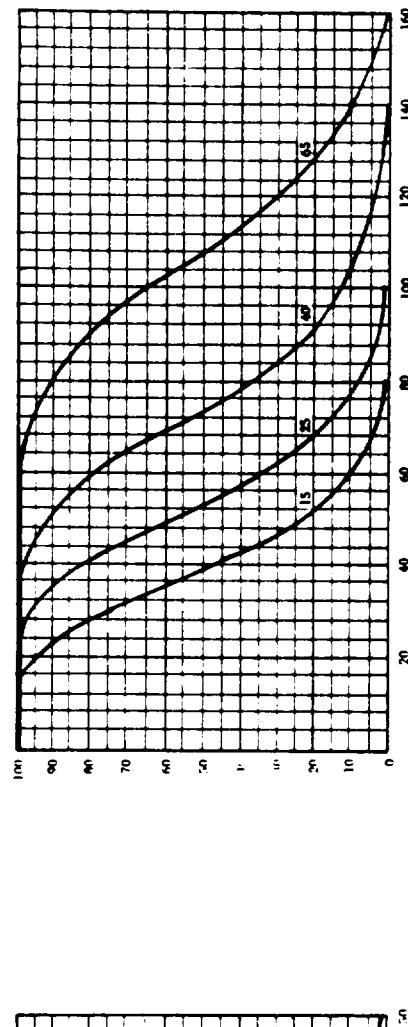
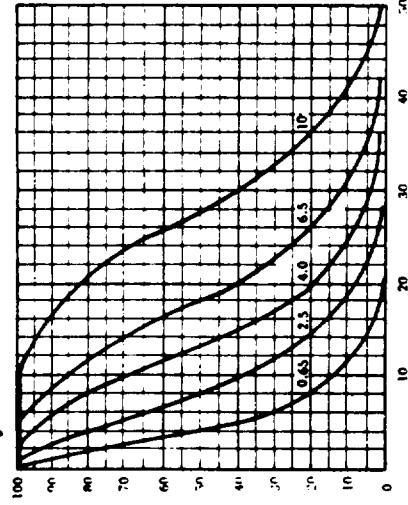
Type of sampling plan	Cumulative sample size	Acceptable Quality Levels (normal inspection)														Cumulative sample size																													
		Less than 1.0	1.0	1.5	$\times$	2.5	4.0	6.5	10	15	25	$\times$	40	$\times$	65	$\times$	100	$\times$	150	$\times$	Higher than 250																								
Single	13	$\nabla$	0	1	Use	Use	0	2	3	3	4	5	6	7	8	9	10	11	12	13	14	15	18	19	21	22	27	28	30	31	41	42	44	45	$\Delta$	13									
Double	8	$\nabla$	*	Letter	Letter	Letter	0	2	0	3	1	4	2	5	3	7	5	9	6	10	7	11	9	14	11	16	15	20	17	22	23	29	31	$\Delta$	8										
Double	16	*	*	D	G	F	1	2	3	4	5	6	7	8	9	11	12	12	13	15	16	18	19	23	24	26	27	34	35	37	38	52	53	56	57	16									
Multiple	3	$\nabla$	*	*	*	*	0	2	0	2	*	3	*	4	0	4	0	4	0	5	0	6	1	7	1	8	2	9	3	10	4	12	6	15	6	16	$\Delta$	3							
Multiple	6	*	*	*	*	*	0	2	0	3	0	3	1	5	1	6	2	7	3	8	3	9	4	10	6	12	7	14	10	17	11	19	16	25	17	27	6								
Multiple	9	*	*	*	*	*	0	2	0	3	1	4	2	6	3	8	4	9	6	10	7	12	8	13	11	17	13	19	17	24	19	27	26	36	29	39	9								
Multiple	12	*	*	*	*	*	0	3	1	4	2	5	3	7	5	10	6	11	8	13	10	15	12	17	16	22	19	25	24	31	27	34	37	46	40	49	12								
Multiple	15	*	*	*	*	*	1	3	2	4	3	6	5	8	7	11	9	12	11	15	14	17	17	20	22	25	25	29	32	37	36	40	49	53	58	15									
Multiple	18	*	*	*	*	*	1	3	3	5	4	6	7	9	10	12	12	14	14	17	18	20	21	23	27	29	31	33	40	43	45	47	61	64	65	68	18								
Multiple	21	*	*	*	*	*	2	3	4	5	6	7	9	10	13	14	14	15	18	19	21	22	25	26	32	33	37	38	48	49	53	54	72	73	77	78	21								
							Less than 1.5	1.5	$\times$	2.5	4.0	6.5	10	15	25	$\times$	40	$\times$	65	$\times$	100	$\times$	150	$\times$	250	$\times$	Higher than 250																		

Acceptable Quality Levels (tightened inspection)

- $\Delta$  = Use next preceding sample size code letter for which acceptance and rejection numbers are available.  
 $\nabla$  = Use next subsequent sample size code letter for which acceptance and rejection numbers are available.  
 Ac = Acceptance number.  
 Re = Rejection number.  
 \* = Use single sampling plan above (or alternatively use letter H).  
 # = Acceptance not permitted at this sample size.

**TABLE X-F—Tables for sample size code letter: F****CHART F - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**

(Curves for double and multiple sampling are matched as closely as practicable)

PERCENT OF LOTS  
DEFECTED TO BE  
ACCEPTED ( $p_a$ )QUALITY OF SUBMITTED LOTS ( $p$ , in percent defective for AQL's  $\leq 10$ ; in defects per hundred units for AQL's  $> 10$ )

Note: Figures on curves are Acceptable Quality Levels (AQL's) for normal inspection.

**TABLE X-F-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**

$P_a$	Acceptable Quality Levels (normal inspection)										Acceptable Quality Levels (tightened inspection)						
	0.65	2.5	4.0	6.5	10	0.65	2.5	4.0	6.5	10							
99.0	0.050	0.75	2.25	4.31	9.75	0.051	0.75	2.18	4.12	8.92	14.5	17.5	23.9	30.5	37.4	51.7	
95.0	0.256	1.80	4.22	7.13	14.0	0.257	1.78	4.09	6.83	13.1	19.9	23.5	30.8	38.5	46.2	62.2	74.5
90.0	0.525	2.69	5.64	9.03	16.6	0.527	2.66	5.51	8.73	15.8	23.3	27.2	35.1	43.2	51.5	68.4	81.2
75.0	1.43	4.81	8.70	12.8	21.6	1.44	4.81	8.68	12.7	21.1	29.8	34.2	43.1	52.1	61.2	79.5	93.4
50.0	3.41	8.25	13.1	18.1	27.9	3.47	8.39	13.4	18.4	28.4	38.3	43.3	53.3	63.3	73.3	93.3	108
25.0	6.70	12.9	18.7	24.2	34.8	6.93	13.5	19.6	25.5	37.1	48.4	54.0	65.1	76.1	87.0	109	125
10.0	10.9	18.1	24.5	30.4	41.5	11.5	19.5	26.6	33.4	46.4	58.9	65.0	77.0	88.9	101	124	141
5.0	13.9	21.6	28.3	34.4	45.6	15.0	23.7	31.5	38.8	52.6	65.7	72.2	84.8	97.2	109	133	151
1.0	20.6	28.9	35.6	35.6	42.0	53.4	23.0	33.2	42.0	50.2	65.5	80.0	87.0	101	114	127	153
1.0	4.0	6.5	10	10	10	1.0	4.0	6.5	10	15	25	25	40	40	65	65	

Acceptable Quality Levels (tightened inspection)

Notes: Standard distribution used for percent defective components;  $p_a$  denotes per hundred units.

TABLE X-F-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: F

Type of sampling plan	Cumulative sample size	Acceptable Quality Levels (normal inspection)												Acceptable Quality Levels (tightened inspection)																			
		Less than 0.65		1.0		1.5		2.5		4.0		6.5		10		15		25		40		65											
		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re										
Single	20	▽	0	1				1	2	2	3	3	4	5	6	7	8	9	10	11	12	13	14	15	18	19	21	22	△	20			
Double	13	▽	*					0	2	0	3	1	4	2	5	3	7	3	7	5	9	6	10	7	11	9	14	11	16	△	13		
Multiple	26							1	2	3	4	4	5	6	7	8	9	11	12	12	13	15	16	18	19	23	24	26	27	26			
								E	H	G																							
	5	▽	*					*	2	*	2	*	3	*	4	*	4	0	4	0	4	0	5	0	6	1	7	1	8	2	9	△	5
	10							*	2	0	3	0	3	1	5	1	6	2	7	3	8	3	9	4	10	6	12	7	14	10			
	15							0	2	0	3	1	4	2	6	3	8	4	9	6	10	7	12	8	13	11	17	13	19	15			
	20							0	3	1	4	2	5	3	7	5	10	6	11	8	13	10	15	12	17	16	22	19	25	20			
	25							1	3	2	4	3	6	5	8	7	11	9	12	11	15	14	17	17	20	22	25	25	29	25			
	30							1	3	3	5	4	6	7	9	10	12	12	14	14	17	18	20	21	23	27	29	31	33	30			
	35							2	3	4	5	6	7	9	10	13	14	14	15	18	19	21	22	25	26	32	33	37	38	35			
		Less than 1.0						*	1.0	×	1.5	2.5	4.0	6.5	10	15	×	25	×	40	×	65	×	65	×	65	×	Higher than 65					

△ = Use next preceding sample size code letter for which acceptance and rejection numbers are available.

▽ = Use next subsequent sample size code letter for which acceptance and rejection numbers are available.

Ac = Acceptance number

Re = Rejection number

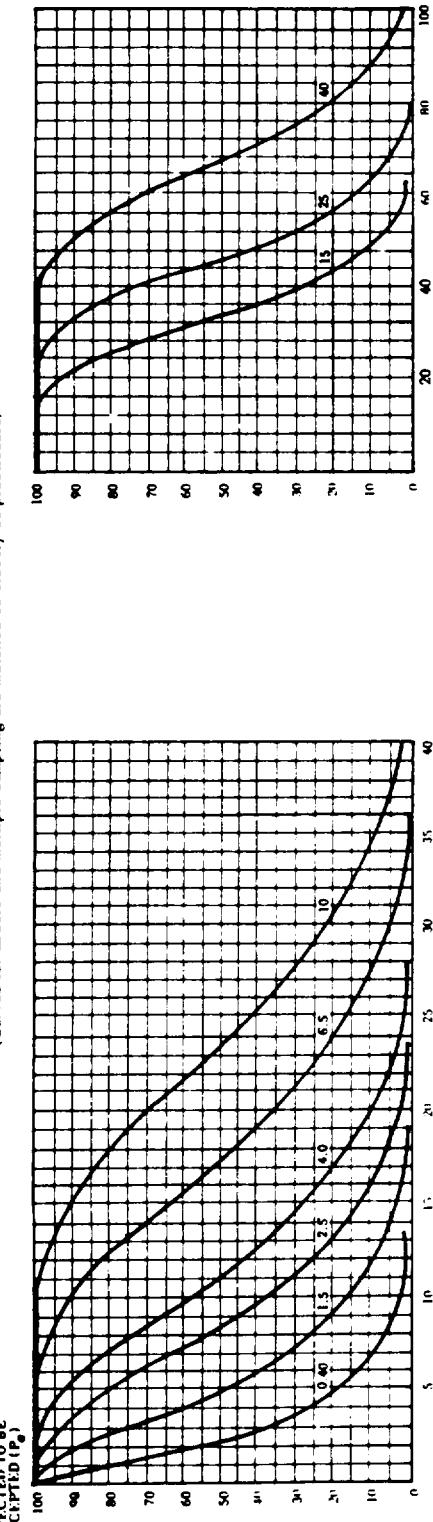
\*

= Use single sampling plan above (or alternatively use letter J).

# = Acceptance not permitted at this sample size.

**TABLE X-G—Tables for sample size code letter: G****CHART G - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**

(Curves for double and multiple sampling are matched as closely as practicable)



DEFECT RATE OF SUBMITTED LOTS ( $p$ , in percent defective for  $MIL-STD-105E$ ;  $\leq 10$ ; in defects per hundred units for AQL's  $> 10$ )

Note: Figures on curves are Acceptable Quality Levels (AQL's) for normal inspection.

**TABLE X-G-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**

P <sub>a</sub>	Acceptable Quality Levels (normal inspection)																	
	p (in percent defective)																	
p (in defects per hundred units)																		
P <sub>a</sub>	0.40	1.5	2.5	4.0	6.5	10	1.5	2.5	4.0	6.5	10	15	25	40				
99.0	0.032	0.475	1.48	2.63	5.94	9.75	0.032	0.466	1.36	2.57	5.57	9.08	11.0	14.9	19.1	23.4	32.3	39.3
95.0	0.161	1.13	2.59	4.39	8.50	13.1	0.160	1.10	2.55	4.26	8.16	12.4	14.7	19.3	24.0	28.9	38.9	46.5
90.0	0.329	1.67	3.50	5.56	10.2	15.1	0.328	1.66	3.44	5.45	9.85	14.6	17.0	21.9	27.0	32.2	42.7	50.8
75.0	0.895	3.01	5.42	7.98	13.4	19.0	0.900	3.00	5.39	7.92	13.2	18.6	21.4	26.9	32.6	38.2	49.7	58.4
50.0	2.14	5.19	8.27	11.4	17.5	23.7	2.16	5.24	8.35	11.5	17.7	24.0	27.1	33.3	39.6	45.8	58.3	67.7
25.0	4.23	8.19	11.9	15.4	22.3	29.0	4.33	8.41	12.3	16.0	23.2	30.3	33.8	40.7	47.6	54.4	67.9	78.0
10.0	6.94	11.6	15.8	19.7	27.1	34.1	7.19	12.2	16.6	20.9	29.0	36.8	40.6	48.1	55.6	62.9	77.4	88.1
5.0	8.94	14.0	18.4	22.5	30.1	37.2	9.36	14.8	19.7	24.2	32.9	41.1	45.1	53.0	60.8	68.4	83.4	94.5
1.0	13.5	19.0	23.7	28.0	35.9	43.3	14.4	20.7	26.3	31.4	41.0	50.0	54.4	63.0	71.3	79.5	95.6	107
0.65	2.5	4.0	6.5	10	X	0.65	2.5	4.0	6.5	10	X	15	X	25	X	40	X	

Acceptable Quality Levels (tightened inspection)

Note: Numerical entries are for general defective computations; column for defects per hundred units.

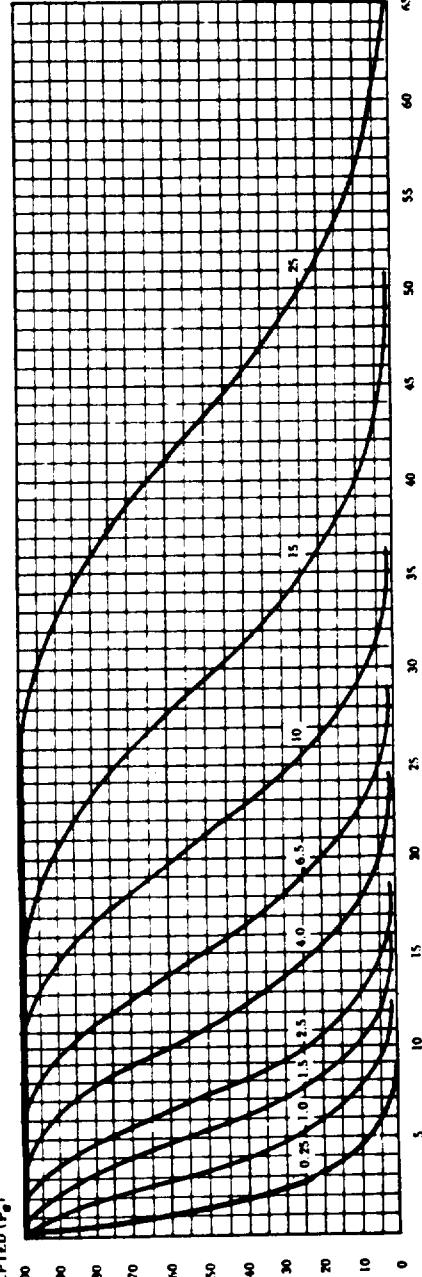
**TABLE X-G-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: G**

Type of sampling plan	Cumulative sample size	Acceptable Quality Levels (normal inspection)												Acceptable Quality Levels (lightened inspection)																					
		Less than 0.40		0.40		0.65		<math>\times</math>		1.0		1.5		2.5		4.0		6.5		10		<math>\times</math>		15		<math>\times</math>		25		<math>\times</math>		40		<math>\times</math>	
Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re				
Single	32	<math>\nabla</math>	0	1				1	2	3	3	4	5	6	7	8	9	10	11	12	13	14	15	18	19	21	22	<math>\Delta</math>	32						
Double	20	<math>\nabla</math>	*		Use	Use	Use	0	2	0	3	1	4	2	5	3	7	3	7	5	9	10	7	11	9	14	11	16	<math>\Delta</math>	20					
	40		*		Letter	Letter	Letter	1	2	3	4	4	5	6	7	8	9	11	12	12	13	15	16	18	19	23	24	26	27	40					
	8	<math>\nabla</math>	*		F	J	H	*	2	*	2	*	3	*	4	*	4	0	4	0	5	0	6	1	7	1	8	2	9	<math>\Delta</math>	8				
	16				*	2	0	3	0	3	1	5	1	6	2	7	3	8	3	9	4	10	6	12	7	14		16							
	24				0	2	0	3	1	4	2	6	3	8	4	9	6	10	7	12	8	13	11	17	13	19		24							
	32				0	3	1	4	2	5	3	7	5	10	6	11	8	13	10	15	12	17	16	22	19	25		32							
	40				1	3	2	4	3	6	5	8	7	11	9	12	11	15	14	17	17	20	22	25	29		40								
	48				1	3	3	5	4	6	7	9	10	12	12	14	14	17	18	20	21	23	27	29	31	33		48							
	56				2	3	4	5	6	7	9	10	13	14	14	15	18	19	21	22	25	26	32	33	37	38		56							
		Less than 0.65	0.65					1.0	1.5	2.5	4.0	6.5	10					15	<math>\times</math>	25															

- $\Delta$  = Use next preceding sample size code letter for which acceptance and rejection numbers are available.
- $\nabla$  = Use next subsequent sample size code letter for which acceptance and rejection numbers are available.
- Ac = Acceptance number.
- Re = Rejection number.
- \* = Use single sampling plan above (or alternatively see letter K).
- # = Acceptance not permitted at this sample size.

**TABLE X-H** — *Tables for sample size code letter: H***CHART H — OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**

(Curves for double and multiple sampling are matched as closely as practicable)  
 PERCENT OF LOTS EXPECTED TO BE ACCEPTED ( $P_a$ )



**QUALITY OF SUBMITTED LOTS** ( $p$ , in percent defective for  $AQL's \leq 10$ ; in defects per hundred units for  $AQL's > 10$ )

Note: Figures on curves are Acceptable Quality Level (AQL's) for normal inspection.

**TABLE X-H1 — TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**

$P_a$	Acceptable Quality Levels (normal inspection)														Acceptable Quality Levels (tightened inspection)					
	0.25	1.0	1.5	2.5	4.0	6.5	$\times$	10	0.25	1.0	1.5	2.5	4.0	$\times$	10	$\times$	15	$\times$	25	
p (in percent defective)																				
99.0	0.020	0.306	0.888	1.69	3.66	6.06	7.41	11.1	0.020	0.298	0.872	1.65	3.57	5.81	7.01	9.54	12.2	15.0	20.7	25.1
95.0	0.103	0.712	1.66	2.77	5.34	8.20	9.74	12.9	0.103	0.710	1.64	2.73	5.23	7.96	9.39	12.3	15.4	18.5	24.9	29.8
90.0	0.210	1.07	2.23	3.54	6.42	9.53	11.2	14.5	0.210	1.06	2.20	3.49	6.30	9.31	10.9	14.0	17.3	20.6	27.3	32.5
75.0	0.574	1.92	3.46	5.09	8.51	12.0	13.8	17.5	0.576	1.92	3.45	5.07	8.44	11.9	13.7	17.2	20.8	24.5	31.8	37.4
50.0	1.38	3.33	5.31	7.30	11.3	15.2	17.2	21.2	1.39	3.36	5.35	7.34	11.3	15.3	17.3	21.6	25.3	29.3	37.3	43.3
25.0	2.74	5.30	7.70	10.0	14.5	18.8	21.0	25.2	2.77	5.39	7.84	10.2	14.8	19.4	21.6	26.0	30.4	34.8	43.5	49.9
10.0	4.50	7.56	10.3	12.9	17.8	22.4	24.7	29.1	4.61	7.78	10.6	13.4	18.6	23.5	26.0	30.8	35.6	40.3	49.5	56.4
5.0	5.82	9.13	12.1	14.8	19.9	24.7	27.0	31.6	5.99	9.49	12.6	15.5	21.0	26.3	28.9	33.9	38.9	43.8	53.4	60.5
1.0	8.80	12.5	15.9	18.8	24.3	29.2	31.7	36.3	9.21	13.3	16.8	20.1	26.2	32.0	34.8	40.3	45.6	50.9	61.1	68.7
0.40	1.5	2.5	4.0	6.5	$\times$	10	$\times$	0.40	1.5	2.5	4.0	6.5	$\times$	10	$\times$	15	$\times$	25	$\times$	

Acceptable Quality Levels (tightened inspection)

Note: Binomial distribution used for general defective components. Probable for defects per hundred units.

TABLE X-H2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: H

Type of sampling plan	Cumulative sample size	Acceptable Quality Levels (normal inspection)												Acceptable Quality Levels (tightened inspection)																	
		Less than 0.25	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	X	10	X	15	X	25	X	Higher than 25													
Single	50	▽	0	1	Use	Use	Use	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	18	19	21	22	△	50			
Double	32	▽	*	Letter	Letter	Letter	0	2	0	3	1	4	2	5	3	7	3	7	5	9	6	10	7	11	9	14	11	16	△	32	
	64	▽	*	G	K	J	*	2	*	2	*	3	*	4	0	4	0	4	0	5	0	6	1	7	1	8	2	9	△	64	
	13	▽	*				*	2	0	3	0	3	1	5	1	6	2	7	3	8	3	9	4	10	6	12	7	14	13	26	
	26	▽	*				*	2	0	3	0	3	1	5	1	6	2	7	3	8	3	9	4	10	6	12	7	14	13	26	
	39	▽	*				*	2	0	3	1	4	2	6	3	8	4	9	6	10	7	12	8	13	11	17	13	19	13	39	
	52	▽	*				*	0	3	1	4	2	5	3	7	5	10	6	11	8	13	10	15	12	17	16	22	19	25	13	52
Multiple	65	▽	*				*	1	3	2	4	3	6	5	8	7	11	9	12	11	15	14	17	17	20	22	25	25	29	65	
	78	▽	*				*	1	3	3	5	4	6	7	9	10	12	12	14	14	17	18	20	21	23	27	29	31	33	78	
	91	▽	*				*	2	3	4	5	6	7	9	10	13	14	14	15	18	19	21	22	25	26	32	33	37	38	91	
								Less than 0.40	0.40	X	0.65	1.0	1.5	2.5	4.0	6.5	X	10	X	15	X	25	X			Higher than 25					

△ = Use next preceding sample size code letter for which acceptance and rejection numbers are available.

▽ = Use next subsequent sample size code letter for which acceptance and rejection numbers are available.

Ac = Acceptance number

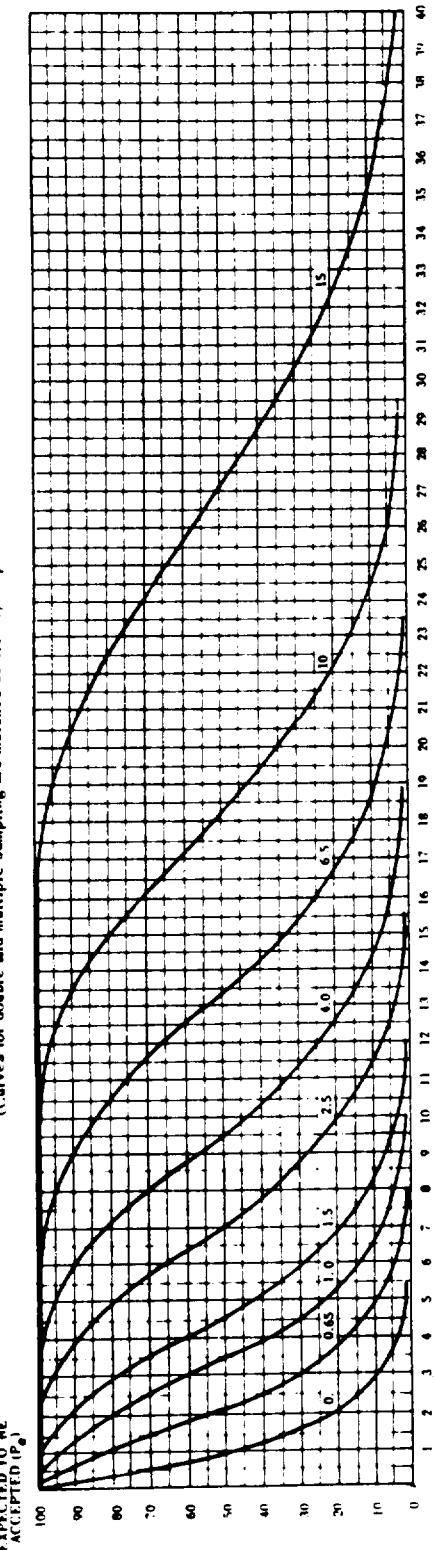
Re = Rejection number

\* = Use single sampling plan above (or alternatively use letter L).

# = Acceptance not permitted at this sample size.

**TABLE X-J—Tables for sample size code letter: J****CHART J - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**

(Curves for double and multiple sampling are matched as closely as practicable)

QUALITY OF SUBMITTED LOTS ( $p$ , in percent defective for  $AOQL \leq 10$ ; in defects per hundred units for  $AOQL > 10$ )

Note: Figures on curves are Acceptable Quality Levels (AOQL) for normal inspection.

**TABLE X-J-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**

$P_Ac$	Acceptable Quality Levels (normal inspection)																					
	$p$ (in defects per hundred units)																					
$p$ (in percent defective)																						
	0.15	0.65	1.0	1.5	2.5	4.0	6.5	X	10	0.15	0.65	1.0	1.5	2.5	4.0	X	6.5	X	10	X	15	
99.0	0.013	0.188	0.550	1.05	2.30	3.72	4.50	6.13	7.88	9.75	0.013	0.186	0.545	1.03	2.23	3.63	4.38	5.96	7.62	9.35	12.9	15.7
95.0	0.064	0.444	1.03	1.73	3.32	5.06	5.98	7.91	9.89	11.9	0.064	0.444	1.02	1.71	3.27	4.98	5.87	7.71	9.61	11.6	15.6	18.6
90.0	0.132	0.666	1.38	2.20	3.98	5.91	6.91	8.95	11.0	13.2	0.131	0.665	1.38	2.18	3.94	5.82	6.79	8.78	10.8	12.9	17.1	20.3
75.0	0.359	1.202	2.16	3.18	5.30	7.50	8.62	10.9	13.2	15.5	0.360	1.20	2.16	3.17	5.27	7.45	8.55	10.8	13.0	15.3	19.9	23.4
50.0	0.863	2.09	3.33	4.57	7.06	9.55	10.8	13.3	15.8	18.3	0.866	2.10	3.34	4.59	7.09	9.59	10.8	13.3	15.8	18.3	23.3	27.1
25.0	1.72	3.33	4.84	6.31	9.14	11.9	13.3	16.0	18.6	21.3	1.73	3.37	4.90	6.39	9.28	12.1	13.5	16.3	19.0	21.8	27.2	31.2
10.0	2.84	4.78	6.52	8.16	11.3	14.2	15.7	18.6	21.4	24.2	2.88	4.86	6.65	8.35	11.6	14.7	16.2	19.3	22.2	25.2	30.9	35.2
5.0	3.68	5.80	7.66	9.39	12.7	15.8	17.3	20.3	23.2	26.0	3.75	5.93	7.87	9.69	13.1	16.4	18.0	21.2	24.3	27.4	33.4	37.8
1.0	5.59	8.00	10.1	12.0	15.6	18.9	20.5	23.6	26.5	29.5	5.76	8.30	10.5	12.6	16.4	20.0	21.8	25.2	28.5	31.8	38.2	42.9
0.25	1.0	1.5	2.5	4.0	X	6.5	X	10	X	0.25	1.0	1.5	2.5	4.0	X	6.5	X	10	X	15	X	

Acceptable Quality Levels (tightened inspection)

Note: All values given in above table based on Poisson distribution as an approximation to the binomial.

TABLE X-J-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: J

Type of sampling plan	Cumulative sample size	Acceptable Quality Levels (normal inspection)																			Cumulative sample size											
		Less than 0.15		0.15		0.25		>X	0.40	0.65	1.0	1.5	2.5	4.0	>X	6.5	>X	10	>X	15		>X	Higher than 15									
		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac
Single	80	>	*	0	1			1	2	3	3	4	5	6	7	8	8	9	10	11	12	13	14	15	18	19	21	22	>	80		
	50	>	*			Use	Use	0	2	0	3	1	4	2	5	3	7	3	7	5	9	6	10	7	11	9	14	11	16	>	50	
Double	100					Letter	Letter	1	2	3	4	4	5	6	7	8	9	11	12	12	13	15	16	18	19	23	24	26	27	100		
	20	>	*					*	2	*	2	*	3	*	4	0	4	0	4	0	5	0	6	1	7	1	8	2	9	>	20	
Multiple	40							*	2	0	3	0	3	1	5	1	6	2	7	3	8	3	9	4	10	6	12	7	14		40	
	60							0	2	0	3	1	4	2	6	3	8	4	9	6	10	7	12	6	13	11	17	13	19		60	
	80							0	3	1	4	2	5	3	7	5	10	6	11	8	13	10	15	12	17	16	22	19	25		80	
	100							1	3	2	4	3	6	5	8	7	11	9	12	11	15	14	17	17	20	22	25	29		100		
	120							1	3	3	5	4	6	7	9	10	12	12	14	14	17	18	20	21	23	27	29	31	33		120	
	140							2	3	4	5	6	7	9	10	13	14	14	15	18	19	21	22	25	26	32	33	37	38		140	
								Less than 0.25	0.25	>X	0.40	0.65	1.0	1.5	2.5	4.0	>X	6.5	>X	10	>X	15	>X	15	>X	15	>X	15	>X	15	>X	15

Acceptable Quality Levels (tightened inspection)

△ = Use next preceding sample size code letter for which acceptance and rejection numbers are available.

▽ = Use next subsequent sample size code letter for which acceptance and rejection numbers are available.

Ac = Acceptance number

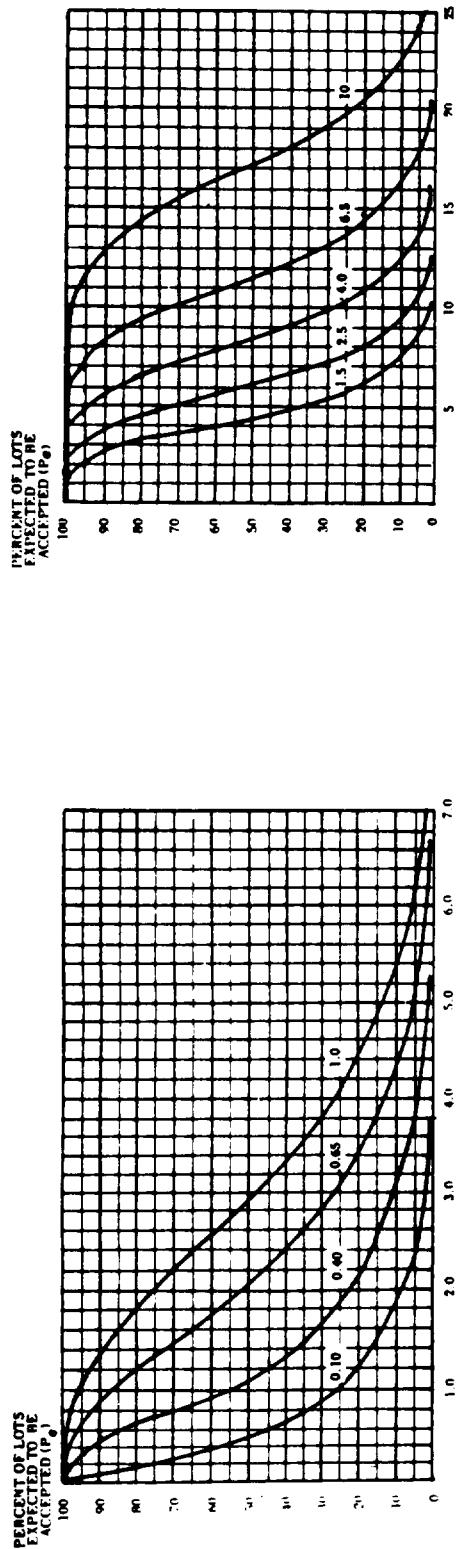
Re = Rejection number

• = Use single sampling plan above (or alternatively use letter M)

\* = Acceptance not permitted at this sample size.

**TABLE X-K**—Tables for sample size code letter: K**CHART K - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**

(Curves for double and multiple sampling are matched as closely as practicable)

n (VII) = n (MIL-STD-105E) 1.0% (n, in percent defective for AOQ<sub>a</sub>'s  $\leq 10$ ; in defects per hundred units for AOQ<sub>a</sub>'s  $> 10$ )Note: Figures on curves are Acceptable Quality Levels (AOQ<sub>a</sub>'s) for normal inspection.**TABLE X-K-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**

P <sub>a</sub>	Acceptable Quality Levels (normal inspection)										Acceptable Quality Levels (tightened inspection)		
	0.10	0.40	0.65	1.0	1.5	2.5	4.0	6.0	8.0	10.0	15.0	20.0	
99.0	0.0001	0.119	0.349	0.658	1.43	2.33	2.81	3.82	4.86	5.98	8.28	10.1	
95.0	0.0410	0.284	0.654	1.09	2.09	3.19	3.76	4.94	6.15	7.40	9.95	11.9	
90.0	0.0840	0.426	0.882	1.40	2.52	3.73	4.35	5.62	6.92	8.24	10.9	13.0	
75.0	0.230	0.769	0.382	2.03	3.38	4.77	5.47	6.90	8.34	9.79	12.7	14.9	
50.0	0.554	1.34	2.14	2.94	4.54	6.14	6.94	8.53	10.1	11.7	14.9	17.3	
25.0	1.11	2.15	3.14	4.09	5.94	7.75	8.64	10.4	12.2	13.9	17.4	20.0	
10.0	1.84	3.11	4.26	5.35	7.42	9.42	10.4	12.3	14.2	16.1	19.8	22.5	
5.0	2.40	3.80	5.04	6.20	8.41	10.5	11.5	13.6	15.6	17.5	21.4	24.2	
1.0	3.68	5.31	6.73	8.04	10.5	12.8	18.3	16.1	18.3	20.4	24.5	27.5	
0.15	0.65	1.0	1.5	2.5	4.0	6.5	10	X	X	X	X	X	

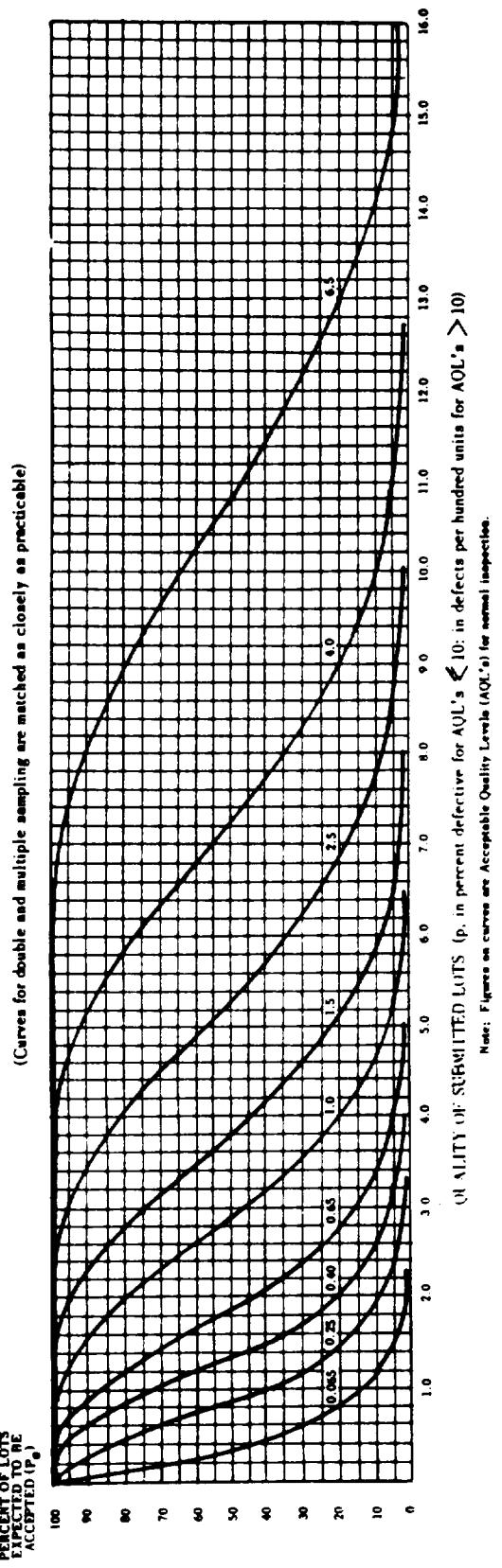
Note: All values given in above table based on Poisson distribution as an approximation to the Binomial.

**TABLE X-K-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: K**

Type of sampling plan	Cumulative sample size	Acceptable Quality Levels (normal inspection)														Cumulative sample size														
		Less than 0.10	0.10	0.15	X	0.25	0.40	0.65	1.0	1.5	2.5	X	4.0	X	6.5	X	10	Higher than 10												
Single	125	△	0	1	Use	Use	Use	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac												
Double	80	▽	•	Letter	Letter	Letter	0	2	0	3	1	4	2	5	3	7	5	9	6	10	7	11	9	14	11	16	△	80		
	160			J	M	L	1	2	3	4	5	6	7	8	9	11	12	12	13	15	16	18	19	23	24	26	27	160		
Multiple	32	▽	•				#	2	*	2	*	3	*	4	0	4	0	4	0	5	0	6	1	7	1	8	2	9	△	32
	64						#	2	0	3	0	3	1	5	1	6	2	7	3	8	3	9	4	10	6	12	7	14	64	
	96						0	2	0	3	1	4	2	6	3	8	4	9	6	10	7	12	8	13	11	17	13	19	96	
	128						0	3	1	4	2	5	3	7	5	10	6	11	8	13	10	15	12	17	16	22	19	25	128	
	160						1	3	2	4	3	6	5	8	7	11	9	12	11	15	14	17	17	20	22	25	29	160		
	192						1	3	3	5	4	6	7	9	10	12	12	14	14	17	18	20	21	23	27	31	33	192		
	224						2	3	4	5	6	7	9	10	13	14	14	15	18	19	21	22	25	26	32	33	37	38	224	
	Less than 0.15	0.15	X	0.25	0.40	0.65	1.0	1.5	2.5	X	4.0	X	6.5	X	10	X	Higher than 10													

Acceptable Quality Levels (tightened inspection)

- △ = Use next preceding sample size code letter for which acceptance and rejection numbers are available.
- ▽ = Use next subsequent sample size code letter for which acceptance and rejection numbers are available.
- Ac = Acceptance number
- Re = Rejection number
- = Use single sampling plan above (or alternatively use letter N).
- \* = Acceptance not permitted at this sample size.

**TABLE X-L** — Tables for sample size code letter: L**CHART L - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**  
(Curves for double and multiple sampling are matched as closely as practicable)**TABLE X-L-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**

$P_a$	Acceptable Quality Levels (normal inspection)							Acceptable Quality Levels (tightened inspection)	
	0.065	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5
p (in percent defective or defects per hundred units)									
99.0	0.0051	0.075	0.218	0.412	0.893	1.45	1.75	2.39	3.05
95.0	0.0256	0.178	0.409	0.683	1.31	1.99	2.35	3.09	3.85
90.0	0.0525	0.266	0.551	0.873	1.58	2.33	2.72	3.51	4.32
75.0	0.144	0.401	0.864	1.27	2.11	2.98	3.42	4.31	5.21
50.0	0.347	0.839	1.34	1.84	2.84	3.84	4.33	5.33	6.33
25.0	0.693	1.35	1.96	2.56	3.71	4.84	5.40	6.51	7.61
10.0	1.15	1.95	2.66	3.34	4.64	5.89	6.50	7.70	8.89
5.0	1.50	2.37	3.15	3.88	5.26	6.57	7.22	8.48	9.72
1.0	2.30	3.32	4.20	5.02	6.55	8.00	8.70	10.1	11.4
0.10	0.40	0.65	1.0	1.5	2.5	3.5	4.0	5.5	6.5

Note: All values given in above table based on Poisson distribution as an approximation to the Binomial.

TABLE X-L-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: L

Type of sampling plan	Cumulative sample size	Acceptable Quality Levels (normal inspection)														Acceptable Quality Levels (tightened inspection)												
		Less than 0.065	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	Higher than 6.5	Less than 0.10	0.10	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	Higher than 6.5			
Single	200	▽	0	1	Use	Use	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re										
Double	125	▽	*	*	Letter	Letter	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re										
Multiple	250	▽	*	*	K	N	M	*	2	*	3	*	4	0	4	0	4	0	5	0	6	1	7	1	8	2	9	
	50	▽	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	△	50
	100	▽	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	100	
	150	▽	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	150	
	200	▽	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	200	
	250	▽	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	250	
	300	▽	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	300	
	350	▽	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	350	
	Less than 0.10	0.10	×	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	Higher than 6.5	Acceptable Quality Levels (tightened inspection)	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re		

△ = Use next preceding sample size code letter for which acceptance and rejection numbers are available.

▽ = Use next subsequent sample size code letter for which acceptance and rejection numbers are available.

Ac = Acceptance number

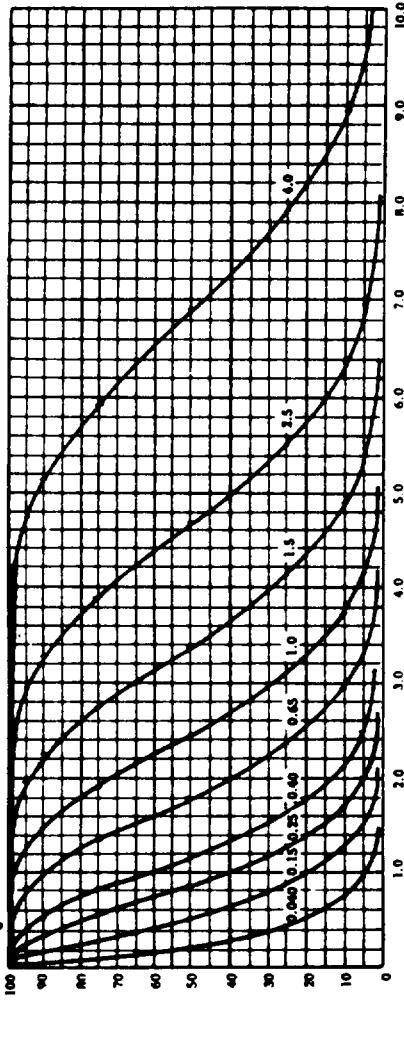
Re = Rejection number

\* = Use single sampling plan above (or alternatively use letter P).

# = Acceptance not permitted at this sample size.

**TABLE X-M—Tables for sample size code letter: M**

**CHART M - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**  
 (Curves for double and multiple sampling are matched as closely as practicable)

**TABLE X-M-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**

P <sub>a</sub> (in percent defective or in defects per hundred units)	Acceptable Quality Levels (normal inspection)								
	0.040	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0
99.0	0.0032	0.047	0.138	0.261	0.566	0.922	1.11	1.51	1.94
95.0	0.0163	0.112	0.259	0.433	0.829	1.26	1.49	1.96	2.44
90.0	0.0333	0.168	0.349	0.533	1.00	1.48	1.72	2.23	2.75
75.0	0.0914	0.305	0.580	0.804	1.34	1.89	2.17	2.74	3.31
50.0	0.220	0.532	0.848	1.17	1.80	2.43	2.75	3.39	4.02
25.0	0.440	0.854	1.24	1.62	2.36	3.07	3.43	4.13	4.83
10.0	0.731	1.23	1.69	2.12	2.94	3.74	4.13	4.89	5.65
5.0	0.951	1.51	2.00	2.46	3.34	4.17	4.58	5.38	6.17
1.0	1.46	2.11	2.67	3.19	4.16	5.08	5.53	6.40	7.25
0.065	0.25	0.40	0.65	1.0	X	X	X	X	X

Acceptable Quality Levels (tightened inspection)

Note: All values given in above table based on Poisson distribution as an approximation to the Binomial

TABLE X-M-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: M

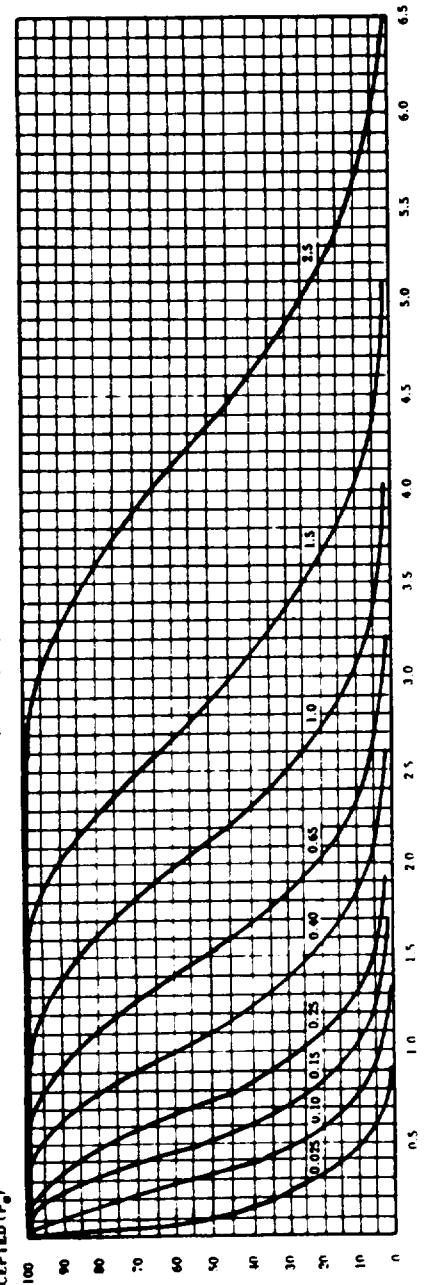
Type of sampling plan	Cumulative sample size	Acceptable Quality Levels (normal inspection)												Acceptable Quality Levels (tightened inspection)																			
		Less than 0.040		0.040		0.065		X		0.10		0.15		0.25		0.40		0.65		1.0		X		1.5		X		2.5		X		4.0	
Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re				
Single	315	△	0	1	Use	Use	Letter	Letter	0	2	0	3	1	4	5	6	7	8	8	9	10	11	12	13	14	15	18	21	22	△	315		
Double	200	△	*	Use	Use	Letter	Letter	0	2	0	3	1	4	2	5	3	7	3	7	5	9	6	10	7	11	9	14	11	16	△	200		
	400			L	P	N		1	2	3	4	4	5	6	7	8	9	11	12	12	13	15	16	18	19	23	24	26	27	400			
Multiple	80	△	*	Use	Use	Letter	Letter	*	2	*	2	*	3	*	4	*	4	0	4	0	4	0	5	0	6	1	7	1	8	2	9	△	80
	160			L	P	N		*	2	0	3	0	3	1	5	1	6	2	6	2	7	3	8	3	9	4	10	6	12	7	14	160	
	240			L	P	N		0	2	0	3	1	4	2	6	3	8	4	9	6	10	7	12	8	13	11	17	13	19	20	240		
	320			L	P	N		0	3	1	4	2	5	3	7	5	10	6	11	8	13	10	15	12	17	16	22	19	25	320			
	400			L	P	N		1	3	2	4	3	6	5	8	7	11	9	12	11	15	14	17	17	20	22	25	25	29	400			
	480			L	P	N		1	3	3	5	4	6	7	9	10	12	12	14	14	17	18	20	21	23	27	29	31	33	480			
	560			L	P	N		2	3	4	5	6	7	9	10	13	14	16	15	18	19	21	22	25	26	32	33	37	38	560			
								Less than 0.065	0.065	X	0.10	0.15	0.25	0.40	0.65	1.0	X	1.5	X	2.5	X	4.0	X										

- △ = Use next preceding sample size code letter for which acceptance and rejection numbers are available.
- ▽ = Use next subsequent sample size code letter for which acceptance and rejection numbers are available.
- Ac = Acceptance number.
- Re = Rejection number.
- \* = Use single sampling plan above (or alternatively use letter Q).
- # = Acceptance not permitted at this sample size.



**TABLE X-N** — Tables for sample size code letter: N**CHART N — OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**

(Curves for double and multiple sampling are matched as closely as practicable)



(All AQL's of 1.00% or less are 1.00% (p. in percent defective for AQL's &lt; 10; in defects per hundred units for AQL's &gt; 10)

Note: Figures on curves are Acceptable Quality Levels (AQL's) for normal inspection.

**TABLE X-N-1 — TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**

P <sub>a</sub>	Acceptable Quality Levels (normal inspection)						
	0.025	0.10	0.15	0.25	0.40	0.65	1.0
p (in percent defective or in defects per hundred units)							
99.0	0.0020	0.030	0.087	0.165	0.357	0.581	0.701
95.0	0.0103	0.071	0.164	0.273	0.523	0.796	0.939
90.0	0.0210	0.106	0.220	0.349	0.630	0.931	1.09
75.0	0.0576	0.192	0.345	0.567	0.844	1.19	1.37
50.0	0.139	0.336	0.535	0.734	1.13	1.53	1.73
25.0	0.277	0.539	0.784	1.02	1.48	1.94	2.16
10.0	0.461	0.778	1.06	1.34	1.86	2.35	2.60
5.0	0.599	0.949	1.26	1.55	2.10	2.63	2.89
1.0	0.921	1.328	1.68	2.01	2.62	3.20	3.48
0.040	0.15	0.25	0.40	0.65	1.0	1.5	2.5

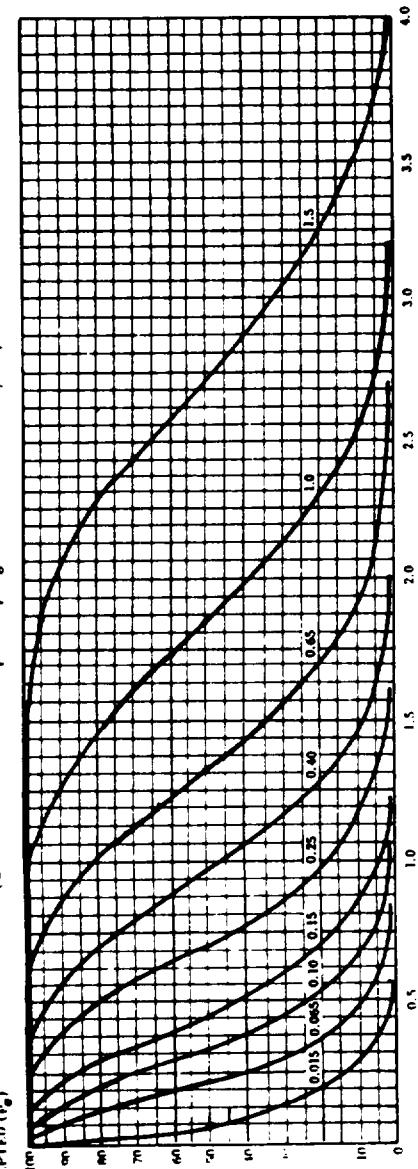
Acceptable Quality Levels (tightened inspection)

Note: All values given in above table based on Poisson distribution as an approximation to the Binomial

TABLE X-N2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: N

Type of sampling plan	Cumulative sample size Less than 0.025	Acceptable Quality Levels (normal inspection)												Acceptable Quality Levels (tightened inspection)																						
		0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	X	1.0	X	1.5	X	2.5	Higher than 2.5	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re								
Single	500	△	0	1						1	2	3	4	5	6	7	8	8	9	10	11	12	13	14	15	18	19	21	22	△	500					
Double	315	△	•							Use	Use																			315						
	630	△	•							Letter	Letter	1	2	3	4	5	6	7	8	9	11	12	12	13	15	16	18	19	23	24	26	27	630			
	125	△	•							M	Q	P	#	2	#	2	#	3	#	4	0	4	0	4	0	5	0	6	1	7	1	8	2	9	△	125
	250	△	•							0	2	0	3	0	3	1	5	1	6	2	7	3	8	3	9	4	10	6	12	7	14		250			
	375	△	•							0	2	0	3	1	4	2	6	3	8	4	9	6	10	7	12	8	13	11	17	13	19		375			
	500	△	•							0	3	1	4	2	5	3	7	5	10	6	11	8	13	10	15	12	17	16	22	19	25		500			
	625	△	•							1	3	2	4	3	6	5	8	7	11	9	12	11	15	14	17	17	20	22	25	25	29		625			
	750	△	•							1	3	3	5	4	6	7	9	10	13	14	14	15	18	19	21	22	25	26	32	33	37	39	750			
	875	△	•							2	3	4	5	6	7	9															875					
	Less than 0.040		0.065		0.10		0.15		0.25		0.40		0.65		X		1.0		X		1.5		X		2.5		X		Higher than 2.5							

- △ = Use next preceding sample size code letter for which acceptance and rejection numbers are available.
- ▽ = Use next subsequent sample size code letter for which acceptance and rejection numbers are available.
- Ac = Acceptance number
- Re = Rejection number
- = Use single sampling plan above (or alternatively use letter R).
- = Acceptance not permitted at this sample size.

**TABLE X-P** — *Tables for sample size code letter: P***CHART P - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**  
(Curves for double and multiple sampling are matched as closely as practicable)QUALITY OF SUBMITTED LOTS ( $p$ ) in percent defective for AOL's  $\leq 10$ ; in defects per hundred units for AOL's  $> 10$ 

Note: Figures on curves are Acceptable Quality Levels (AQL's) for normal inspection.

**TABLE X-P-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**

$r_0$	Acceptable Quality Levels (normal inspection)							Acceptable Quality Levels (tightened inspection)						
	0.015	0.025	0.10	0.15	0.25	0.40	$\times$	0.65	$\times$	1.0	$\times$	1.5	$\times$	1.5
min percent defective or defects per hundred units)														
99.0	0.0013	0.0186	0.055	0.103	0.223	0.363	0.438	0.596	0.762	0.935	1.29	1.57		
95.0	0.0064	0.0444	0.102	0.171	0.327	0.498	0.587	0.771	0.961	1.16	1.56	1.86		
90.0	0.0131	0.0665	0.138	0.218	0.394	0.582	0.679	0.878	1.08	1.29	1.71	2.03		
75.0	0.0360	0.120	0.216	0.317	0.527	0.745	0.855	1.08	1.30	1.53	1.99	2.34		
50.0	0.0866	0.210	0.334	0.459	0.709	0.959	1.08	1.33	1.58	1.83	2.33	2.71		
25.0	0.173	0.337	0.490	0.639	0.928	1.21	1.35	1.63	1.90	2.18	2.72	3.12		
10.0	0.288	0.486	0.665	0.835	1.16	1.47	1.62	1.93	2.22	2.52	3.09	3.52		
5.0	0.375	0.593	0.787	0.969	1.31	1.64	1.80	2.12	2.43	2.74	3.34	3.78		
1.0	0.576	0.830	1.05	1.26	1.64	2.00	2.18	2.52	2.85	3.18	3.82	4.29		
0.025	0.10	0.15	0.25	0.40	$\times$	0.65	$\times$	1.0	$\times$	1.5	$\times$	$\times$		

Acceptable Quality Levels (tightened inspection)

Note: All values given in above table based on Poisson distribution are an approximation to the Binomial

TABLE X-P-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: P

Type of sampling plan	Acceptable Quality Levels (normal inspection)												Acceptable Quality Levels (tightened inspection)																		
	Cumulative sample size		0.010	0.015	0.025	X	0.040	0.065	0.10	0.15	0.25	0.40	X	0.65	X	1.0	X	Higher than 1.5													
	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re													
Single	800	▽	0	1			1	2	2	3	3	4	5	6	7	8	8	Higher than 1.5													
Double	500	▽	*	*	Use	Use	0	2	0	3	1	4	2	5	3	7	3	Higher than 1.5													
	1000	*	*	*	Letter	Letter	1	2	3	4	4	5	6	7	8	9	11	12	13	14	15	16	17	18	19	21	22	△	800		
	200	▽	*	*	N	R	Q	*	2	*	2	*	3	*	4	0	4	0	4	0	5	0	6	1	7	1	8	2	9	△	200
	400	*	*	*	N	R	Q	*	2	0	3	0	3	1	5	1	6	2	7	3	8	3	9	4	10	6	12	7	14	400	
	600	*	*	*	N	R	Q	*	2	0	3	1	4	2	6	3	8	4	9	6	10	7	12	8	13	11	17	13	19	600	
	800	*	*	*	N	R	Q	*	3	1	4	2	5	3	7	5	10	6	11	8	13	10	15	12	17	16	22	19	25	800	
	1000	*	*	*	N	R	Q	*	3	2	4	3	6	5	8	7	11	9	12	11	15	14	17	17	20	22	25	29	1000		
	1200	*	*	*	N	R	Q	*	3	3	5	4	6	7	9	10	12	12	14	14	17	16	20	21	23	27	31	33	1200		
	1400	*	*	*	N	R	Q	*	3	4	5	6	7	9	10	13	14	14	15	18	19	21	22	25	26	32	33	37	38	1400	
	Less than 0.025	*	*	*	N	R	Q	*	0.040	*	0.065	*	0.10	*	0.15	*	0.25	*	0.40	*	0.65	*	1.0	*	X	1.5	X	Higher than 1.5			

△ = Use next preceding sample size code letter for which acceptance and rejection numbers are available.

▽ = Use next subsequent sample size code letter for which acceptance and rejection numbers are available.

Ac = Acceptance number.

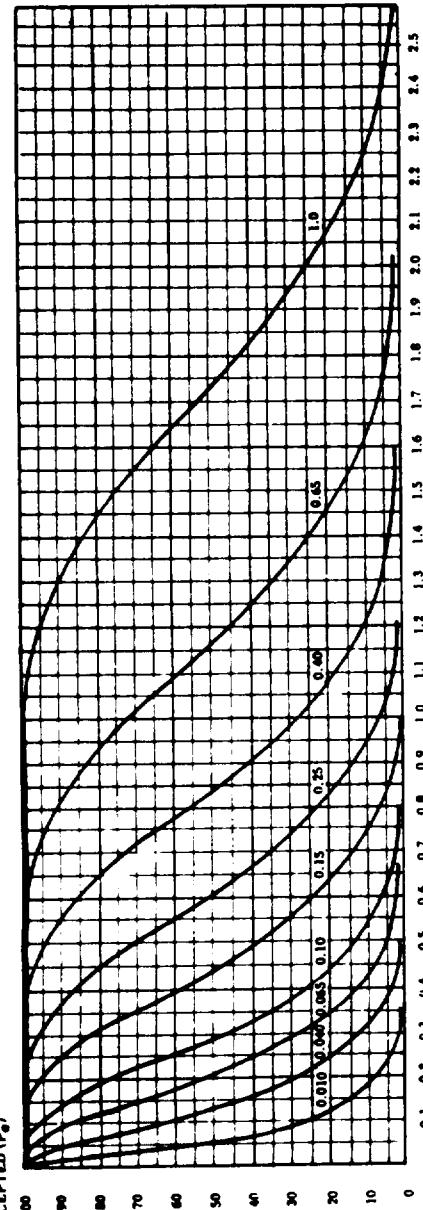
Re = Rejection number.

\* = Use single sampling plan above.

# = Acceptance not permitted at this sample size.

**TABLE X-Q—Tables for sample size code letter: Q****CHART Q - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**

(Curves for double and multiple sampling are matched as closely as practicable)

(QUALITY OF SUBMITTED LOTS (p, in percent defective for AOL's  $\leq 10$ ; in defects per hundred units for AOL's  $> 10$ )

Note: Figures on curves are Acceptable Quality Levels (AQL's) for normal inspection

**TABLE X-Q-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**

$P_a$	Acceptable Quality Levels (normal inspection)								
	0.010	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0
p (in percent defective or defects per hundred units)									
99.0	0.00001	0.0119	0.0349	0.0656	0.1143	0.232	0.281	0.382	0.598
95.0	0.00010	0.0284	0.0654	0.109	0.209	0.318	0.376	0.494	0.740
90.0	0.00040	0.0426	0.0882	0.140	0.252	0.372	0.435	0.562	0.824
75.0	0.00230	0.0769	0.138	0.203	0.338	0.476	0.547	0.690	0.979
50.0	0.0554	0.134	0.214	0.294	0.454	0.614	0.694	0.853	1.01
25.0	0.111	0.215	0.314	0.409	0.594	0.775	0.864	1.04	1.22
10.0	0.184	0.310	0.426	0.534	0.742	0.942	1.04	1.23	1.42
5.0	0.240	0.380	0.504	0.620	0.841	1.05	1.15	1.36	1.56
1.0	0.368	0.531	0.672	0.804	1.05	1.28	1.83	1.61	1.83
0.015	0.065	0.10	0.15	0.25	0.40	0.65	0.65	0.65	X

Acceptable Quality Levels (lightened inspection)

Note: All values given in above tables based on Poisson distribution are an approximation to the Binomial

TABLE X-Q-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: Q

Type of sampling plan	Cumulative sample size	Acceptable Quality Levels (normal inspection)														Cumulative sample size													
		0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	0.85	1.0	Higher than 1.0															
Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re														
P	R	S	R	P	R	S	R	P	R	S	R	P	R	S	R														
Single	1250	0	1			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	21	22	Δ	1250	
Double	800	Use	Use	Use	Use	0	2	0	3	1	4	2	5	3	7	3	7	5	9	6	10	7	11	9	14	11	16	Δ	800
	1600	Letter	•	Letter	Letter	1	2	3	4	4	5	6	7	8	9	11	12	12	13	15	16	18	19	23	24	26	27	1600	
Multiple	315	•				#	2	#	2	#	3	#	4	0	4	0	4	0	5	0	6	1	7	1	8	2	9	Δ	315
	630					#	2	0	3	0	3	1	5	1	6	2	7	3	8	3	9	4	10	6	12	7	14	630	
	945					0	2	0	3	1	4	2	6	3	8	4	9	6	10	7	12	8	13	11	17	13	19	945	
	1260					0	3	1	4	2	5	3	7	5	10	6	11	8	13	10	15	12	17	16	22	19	25	1260	
	1575					1	3	2	4	3	6	5	8	7	11	9	12	11	15	14	17	17	20	22	25	29	1575		
	1890					1	3	3	5	4	6	7	9	10	12	12	14	14	17	18	20	21	23	27	29	31	33	1890	
	2205					2	3	4	5	6	7	9	10	13	14	14	15	18	19	21	22	25	26	32	33	37	38	2205	
		0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	0.85	1.0	Higher than 1.0	1.0	X	1.0	X	1.0	X	1.0	X	1.0	X	1.0	X	1.0	X	

Acceptable Quality Levels (tightened inspection)

Δ = Use next preceding sample size code letter for which acceptance and rejection numbers are available.

Ac = Acceptance number

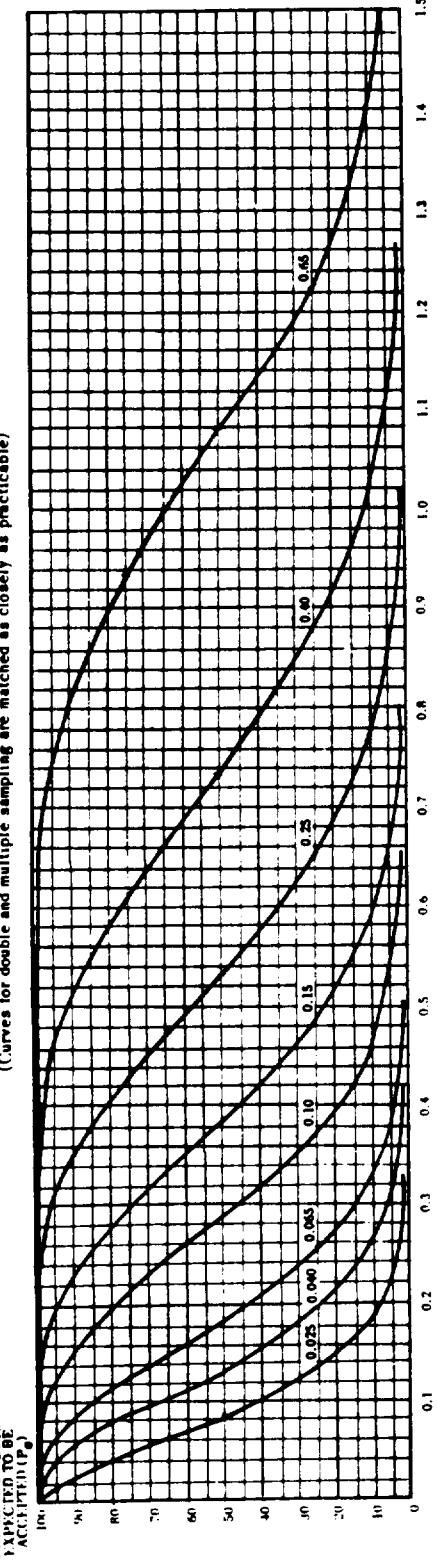
Re = Rejection number

• = Use single sampling plan above.

# = Acceptance not permitted at this sample size.

**TABLE X-R—Tables for sample size code letter: R****CHART R - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**

(Curves for double and multiple sampling are matched as closely as practicable)



1.0 MILITARY (F-111) LOTS (r, in percent defective for AQL's < 10; in defects per hundred units for AQL's > 10)

Note: Figures on curves are Acceptable Quality Levels (AQL's) for normal inspection.

**TABLE X-R-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS**

P <sub>a</sub>	Acceptable Quality Levels (normal inspection)						
	0.025	0.040	0.065	0.10	0.15	0.25	0.40
r (in percent defective or defects per hundred units)							
99.0	0.0074	0.0218	0.0412	0.0692	0.145	0.175	0.239
95.0	0.0178	0.0409	0.0683	0.131	0.199	0.235	0.309
90.0	0.0266	0.0551	0.0873	0.158	0.233	0.272	0.351
75.0	0.0461	0.0868	0.127	0.211	0.298	0.342	0.431
50.0	0.0839	0.134	0.184	0.284	0.384	0.433	0.533
25.0	0.115	0.196	0.256	0.371	0.484	0.540	0.651
10.0	0.195	0.266	0.334	0.464	0.589	0.650	0.770
5.0	0.237	0.315	0.388	0.526	0.657	0.722	0.848
1.0	0.332	0.420	0.502	0.655	0.800	0.870	1.02
0.040	0.065	0.10	0.15	X	0.25	X	0.40
							X 0.65

Acceptable Quality Levels (tightened inspection)

Note: All values given in above table based on Poisson distribution as an approximation to the binomial

TABLE X-R-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: R

Type of sampling plan	Cumulative sample size	Acceptable Quality Levels (normal inspection)														Cumulative sample size															
		0.010	0.015	X	0.025	0.040	0.065	0.10	0.15	X	0.25	X	0.40	X	0.65	Higher than 0.65															
Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac															
Single	2000	0	1	Use	Use	1	2	2	3	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	21	22	△	2000	
Double	1250	•	Letter	Letter	0	2	0	3	1	4	2	5	3	7	3	7	5	9	6	10	7	11	9	14	11	16	△	1250			
	2500	•	Letter	Letter	1	2	3	4	4	5	6	7	8	9	11	12	12	13	15	16	18	19	23	24	25	27	2500				
Multiple	500			0	P	S	*	2	*	2	*	3	*	4	0	4	0	4	0	5	0	6	1	7	1	8	2	9	△	500	
	1000			*	2	0	3	0	3	1	5	1	6	2	7	3	8	3	9	4	10	7	12	8	13	11	17	13	19	1000	
	1500			0	2	0	3	1	4	2	6	3	8	4	9	6	10	7	12	8	13	11	17	13	19	1500					
	2000			0	3	1	4	2	5	3	7	5	10	6	11	8	13	10	15	12	17	16	22	19	25	2000					
	2500			1	3	2	4	3	6	5	8	7	11	9	12	11	15	14	17	17	20	22	25	25	29	2500					
	3000			1	3	3	5	4	6	7	9	10	12	12	14	14	17	18	20	21	23	27	29	31	33	3000					
	3500			2	3	4	5	6	7	9	10	13	14	14	15	18	19	21	22	25	26	32	33	37	38	3500					
	0.010	0.015	X	0.025	0.040	0.065	0.10	0.15	X	0.25	X	0.40	X	0.65	X	0.65	X	0.65	X	0.65	X	0.65	X	0.65	X	0.65	X	0.65	X	0.65	X
	Acceptable Quality Levels (tightened inspection)														Higher than 0.65			Higher than 0.65			Higher than 0.65			Higher than 0.65			Higher than 0.65				

- △ = Use next preceding sample size code letter for which acceptance and rejection numbers are available.
- Ac = Acceptance number.
- Re = Rejection number.
- \* = Use single sampling plan above.
- = Acceptance not permitted at this sample size.



TABLE X-5—Tables for sample size code letter: S

Type of sampling plan	Cumulative sample size	Acceptable Quality Level (normal inspection)	Rejection number	Acceptable Quality Level (tightened inspection)
		X		
Single	3150	1	2	
	2000	0	2	
Double	4000	1	2	
	800	*	2	
	1600	*	2	
	2400	0	2	
Multiple	3200	0	3	
	4000	1	3	
	4800	1	3	
	5600	2	3	
				0.025

Ac = Acceptance number  
 Re = Rejection number  
 \* = Acceptance not permitted at this sample size.

*Index of terms with special meanings*

<i>Term</i>	<i>Paragraph</i>
Acceptable Quality Level (AQL) .....	4.2 and 11.1
Acceptance number .....	9.4 and 10.1.1
Attributes .....	1.4
Average Outgoing Quality (AOQ) .....	11.3
Average Outgoing Quality Limit (AOQL) .....	11.4
Average sample size .....	11.5
Batch .....	5.1
Classification of defects .....	2.1
Code letters .....	9.3
Critical defect .....	2.1.1
Critical defective .....	2.2.1
Defect .....	2.1
Defective unit .....	2.2
Defects per hundred units .....	3.3
Double sampling plan .....	10.1.2
Inspection .....	1.3
Inspection by attributes .....	1.4
Inspection level .....	9.2
Inspection lot or inspection batch .....	5.1
Isolated lot .....	11.6
Limiting Quality (LQ) .....	11.6
Lot .....	5.1
Lot or batch size .....	5.3
Major defect .....	2.1.2
Major defective .....	2.2.2
Minor defect .....	2.1.3
Minor defective .....	2.2.3
Multiple sampling plan .....	10.1.3
Normal inspection .....	8.1 and 8.2
Operating characteristic curve .....	11.1
Original inspection .....	11.2
Percent defective .....	3.2
Preferred AQLs .....	4.6
Process average .....	11.2
Reduced inspection .....	8.2 and 8.3.3
Rejection number .....	10.1.1
Responsible authority .....	1.1
Resubmitted lots or batches .....	6.4
Sample .....	7.1
Sample size .....	7.1
Sample size code letter .....	4.1 and 9.3
Sampling plan .....	9.5
Single sampling plan .....	10.1.1
Small-sample inspection .....	9.2
Switching procedures .....	8.3
Tightened inspection .....	8.2 and 8.3.1
Unit of product .....	1.5

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