

MIL-M-13703D (AR)

AMENDMENT 1  
13 January 1988

## MILITARY SPECIFICATION

MARKER, LOCATION, MARINE, DYE, AN-M59

This Amendment forms a part of Military Specification MIL-M-13703D (AR), dated 20 July 1986, and is approved for use within the U.S. Army Armament, Munitions and Chemical Command and is available for use by all Departments and Agencies of the Department of Defense.

PAGE 3

- 3-3.3: Change "100 percent" to read "99 percent-".
- 3.3.5: Change "One hundred percent" to read "Ninety nine percent".

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- 4.5.1.1: Delete in its entirety and substitute the following:

-4.5.1.1 Sodium salt of fluorescein. To 10 ml. of a 1N. sodium hydroxide solution add 1500 mg. of the sample and dilute the sample solution to 1000 ml. with distilled water- Transfer a 50 ml. aliquot of the solution to another 10 ml. of 1N sodium hydroxide solution and dilute to 100 ml. volume with distilled water. Take a 20 ml. aliquot of this solution, add to 10 ml. of 1N sodium hydroxide solution and dilute to 1000 ml. with distilled water. The final solution contains 1.5 mg. of sample.

Using reagent grade fluorescein, prepare two standard solutions containing 1.0 and 1.5 mg/l of fluorescein, respectively, in accordance with the procedure described above for the sample. Determine the absorbance of the two standard solutions using an appropriate spectrophotometer set at 490 nm. Plot the absorbance values vs. the respective concentrations and draw a straight line through the two points to obtain a calibration curve. The straight line should go through the origin of the x, y axis.

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Determine the absorbance of the diluted sample solution using the spectrophotometer set at 490 nm. Using the calibration curve read off the concentration of the sample using its absorbance value. The percentage of soluble sodium salt of fluorescein shall then be calculated as follows:

% soluble sodium salt=

$$\frac{\text{mg/l (as read from the graph)} \times 1.1325 \times 100}{\text{mg/l final dilution of sample}}$$

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4.5.1.4 Delete in its entirety and substitute the following:

"4.5.1.4 Color. Five hundred (500) ml of distilled water shall be placed in a beaker and twelve and one-half (12.5) g. of sodium chloride and one (1) g. of sample dye added. The solution shall be examined for color by dipping white filter paper into the solution. The paper shall appear canary yellow.

Custodian:  
Army-AR

Preparing activity:  
Army-AR

(Project 1370-A270



