



**Metal Can Defects**  
Identification and Classification

## BULLETIN

**TO:** All Holders of the Metal Can Defects Manual

**SUBJECT:** CONTAINER INTEGRITY DYE TEST PROCEDURE

The purpose of this bulletin is to provide manual holders with the attached procedures for conducting container integrity dye tests.

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## CONTAINER INTEGRITY DYE TEST PROCEDURE

### Purpose

An investigative procedure used to detect container integrity defects that result in leakage on any area of a container, including the scoreline, pull tab and/or double seam.

### Procedure

1. Examine the can and record any container integrity defect or anomaly associated with the container.
2. Determine which area of the can is to be dye tested. Cut away the top or bottom of the container depending on the test site and remove the can contents.
3. Thoroughly wash the can using hot soapy water and a soft brush to remove any remains of the can contents.
4. Thoroughly dry the can manually or allow the can to air dry overnight.
5. Dye Application

#### Ardrox Liquid Visible Red Dye:

Apply the dye to the test site (seam, pull tab, scoreline, etc.).

Optional Step: Ardrox liquid visible red dye may be used with a developer. The function of the developer is to assist in the identification of the dye when it leaks through a test site.

If the developer is being used, spray the developer on the opposite side of the dye test site and allow the developer to dry according to the manufacturer's instructions (this is usually three to five minutes).

#### Magnaflux Zyqlo Liquid Green Fluorescent Dye:

Apply the dye to the test site (seam, pull tab, scoreline, etc.).

A black light must be used to inspect the can in order to detect this fluorescein dye.

6. Initially inspect the can after the dye has been applied and every fifteen minutes thereafter, up to a period of two hours to determine if the dye test result is positive or negative.

The two hour time period is described in the United States Food and Drug Administration (USFDA) Bacteriological Analytical Manual published by AOAC International, 7<sup>th</sup> Edition, 1992. It should be noted that a longer period of time may be used if it is deemed necessary.

7. The dye test results are recorded as either positive or negative. A positive dye test results when the dye has leaked through the test area in a period of two hours or less. A negative dye test results when no dye is detected in the test area after the two hour period has elapsed.

Note: All dyes and developers should be used in ventilated areas and according to the manufacturer's safety instructions.