

Field Spot Test for the Nitrite Ion in Plastic Concrete
(M/T Chem. Proc. C-22.0) Rev. 20040820
(For use on plastic concrete samples)

*** This procedure does not purport to address all the safety concerns associated with its use. It's the responsibility of the user of this procedure to establish appropriate health and safety practices and dispose of hazardous materials in an approved manner.*

SCOPE

To check whether there is any nitrite ions present in a freshly poured concrete member or in subsequent concrete truckloads after which C-21.0 was performed.

REFERENCES:

M/T Chemical Procedure C-20.0, C-21.0

LIMITATIONS and SAFETY

1. Wear appropriate gloves and safety equipment including safety glasses.
2. Ensure that **none of the plastic concrete in the area contacts the hands** or the apparatus and reagents as contamination will spoil the tests performed.
3. The Nitrite Ion Test Strips are sensitive to storage and age. See the Checklist in MT Chemical Procedure C-21.0 (Table 2) in "Field Kit" for more information.

APPARATUS FOR SPOT TESTING PLASTIC CONCRETE

1. Clean paper towels or hand towels (nitrite-free)
2. Logbook and Office Supplies (include the labels)

REAGENTS

1. EM Science™ Nitrite (NO₂⁻) Ion Test Strips (Keep cool and dry after opening. *Keep refrigerated before opening*) Cat # M100071 (pack of 100) from Fisher-Scientific™ (3 tubes of 100 for Field Kit)

PROCEDURE FOR SPOT TESTING PLASTIC CONCRETE FOR NITRITE ION

Option 1

1. Each concrete truck used for casting a component or the final component should be checked using the "SPOT CHECK" nitrite tabs.
2. Using these tabs simply walk along the cast component and insert the tab into the fresh concrete to saturate the indicator. If needed gently pat the concrete to gather some bleed water at the surface before inserting tab.

** It should turn BRIGHT PURPLE or BLACK . If it does not turn this color there is **not enough nitrite or no nitrite** in that portion of component or truckload.

3. Record the results on the Weekly C-22.0 (Field Spot Test for Nitrite) Worksheet, MT Form 511, especially for negative indications.

Option 2

1. Each concrete truck used for casting a component or the final component should be checked using the “SPOT CHECK” nitrite tabs.
2. When the truck discharges concrete into the wheelbarrow for Concrete Technician’s use, insert the tab into the fresh sample of concrete before the air content is checked. If needed gently pat the concrete to gather some bleed water at the surface before inserting tab.

** It should turn BRIGHT PURPLE or BLACK . If it does not turn this color there is **not enough nitrite or no nitrite** in that portion of component or truckload.

3. Record the results on the Weekly C-22.0 (Field Spot Test for Nitrite) Worksheet, MT Form 511, especially for negative indications.

Revision 20040820: Changed #3 in both options from “Record the results on negative indications.” To “Record the results on the Weekly C-22.0 (Field Spot Test for Nitrite) Worksheet, MT Form 511, especially for negative indications.”