

UREA

UREASE/SALICYLATE METHOD · CODE 3647-SC

QUANTITY	CONTENTS	CODE
2 x 25	Urease Delivery Strips	2939-G
2 x 60 mL	*Salicylate Ammonia #1	*3978-H
25 g	*Salicylate #2 Reagent	*7457-G
25 g	*Salicylate #3 Reagent Powder	*7458-G
1	Pipet, 1.0 mL, plastic	0354
1	Spoon, 0.15 g, plastic	0727
1	Spoon, 0.1 g, plastic	0699

***WARNING:** Reagents marked with an * are considered to be potential health hazards. To view or print a Safety Data Sheet (SDS) for these reagents go to www.lamotte.com. Search for the four digit reagent code number listed on the reagent label, in the contents list or in the test procedures. Omit any letter that follows or precedes the four digit code number. For example, if the code is 4450WT-H, search 4450. To obtain a printed copy, contact LaMotte by email, phone or fax.

Emergency information for all LaMotte reagents is available from Chem-Tel: [US, 1-800-255-3924] [International, call collect, 813-248-0585].

NOTE: Store Urease Delivery Strips at 2 – 8°C [36 – 46°F].

Urea is the main nitrogen-containing contaminant in swimming pools. It reacts with free available chlorine to form chloramines which can cause taste and odor problems and eye irritation. Urea also acts as a nutrient for algae and bacteria. It is introduced by bather's sweat and is the main component of urine.

APPLICATION:	Swimming pool water
RANGE:	0.0–6.0 mg/L Urea
MDL:	TBD
METHOD:	Urease catalyzes the hydrolysis of urea to produce ammonia. Salicylate and ammonia react at high pH in the presence of a chlorine donor and an iron catalyst to form a blue indophenol dye, the concentration of which is proportional to the urea concentration in the sample.
SAMPLE HANDLING & PRESERVATION:	Urea solutions are unstable and should be analyzed as soon as possible.
INTERFERENCES:	High concentrations of reducing agents will react with the chlorine donor and result in a negative interference. Color and turbidity can also interfere.

PROCEDURE

1. Press and hold  until colorimeter turns on.
2. Press  to select **Testing Menu**.
3. Select **All Tests** (or another sequence containing **096 Urea**) from **Testing Menu**.
4. Scroll to and select **096 Urea** from menu.
5. Rinse a clean tube [0290] with sample water. Fill to the 10 mL line with sample.
6. Insert tube into chamber, close lid and select **Scan Blank**.
7. Submerge a Urease Delivery Strip [2939] in the sample. Plunge the strip up and down for 30 seconds. [Avoid hitting the bottom of the tube.] Remove and discard strip.
8. Wait exactly 5 minutes.
9. At the end of 5 minute waiting period, use the 1.0 mL plastic pipet [0354] to add 2.0 mL of *Salicylate Ammonia #1 [3978]. [Fill pipet to the line for accurate results.] Cap tube.
10. Invert 2 times to mix. [Do not shake vigorously.]
11. Use the 0.15 g spoon [0727] to add two level measures of *Salicylate #2 Reagent [7457]. [To add a level spoon of powder, tap spoon on edge of reagent container to remove excess powder. Do not add excess powder.] Cap tube.
12. Invert to mix for 30 seconds or until powder dissolves. [Do not shake vigorously.]
13. Wait exactly one minute.
14. At the end of one minute waiting period use the 0.1 g spoon [0699] to add two level measures of *Salicylate #3 Reagent [7458]. [To add a level spoon of powder, tap spoon on edge of reagent container to remove excess powder. Do not add excess powder.]
15. Cap and shake vigorously for at least 30 seconds until all solid has dissolved.
16. Wait exactly 12 minutes for maximum color development.
17. Insert tube into chamber. Close lid. Select **Scan Sample**.
18. Press  to turn colorimeter off, select **Print Test** to print the results, or press  to exit to a previous menu or make another menu selection.



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