DOMINIQUE

STABLCAL® Stabilized Formazin Turbidity Standards For Use With Any Turbidimeter

Instructions for Use

To ensure accurate results, read carefully before proceeding.

WARNING: Reagents included may be harmful if misused. Please read the warnings on all chemical containers and use appropriate safety equipment.



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Introduction

Storing and Handling StablCal®* Standards

- Do not transfer a standard to another container for storage.
- Store standards between 5 and 25 °C (avoid prolonged exposure to temperatures exceeding 40 °C).
- For long-term storage (more than one month between use) refrigerate at 5 °C.
- Do not place used standard from the sample cells back into the original container.
- Always allow the standard to acclimate to ambient instrument temperature before use (not to exceed 40 °C).
- Store away from direct sunlight. Sealed vials should be stored in their original set with the case cover on.
- StablCal Standards ≤1NTU have a unique set of instructions for use. Good calibration technique is essential for accurate low-end measurements.
- Do not attempt to remove the caps from the sealed sample cells (vials).

* StablCal® is a registered trademark of Hach Company.

Instructions for Use

Three sets of instructions are provided in this instruction card. Two of these sets of instructions apply to all StablCal Standards except the <0.1 NTU StablCal Solution (Cat. No. 26597). Follow the special instructions on page 6 for <0.1 NTU StablCal Solutions.

Follow the first set of instructions, *For Infrequently Used StablCal® Standards* on page *4*, if:

- your standards have been sitting undisturbed for longer than one week, **OR**
- your standards are new and received from the manufacturer.

Follow the second set of instructions, *For Frequently Used StablCal® Standards* on page *5*, if:

- your standards are used often (daily or weekly).

Follow the third set of instructions, *Using <0.1 NTU StablCal® Solution* on page *6*, for that solution only.

For Infrequently Used StablCal® Standards

Bulk solution (bottles) or sealed sample cell (vials) standards

These instructions apply to standards that have been sitting undisturbed for more than one week or to new standards received from the manufacturer.

Note: *These instructions apply to all StablCal Standards except the <0.1 NTU StablCal Solution (Cat. No. 26597). If you are using the <0.1 NTU StablCal Solution, follow the instructions on page 6.*

For bulk solution standards:

1. Before breaking the seal on the bottle, invert the standard repeatedly for 2–3 minutes. This breaks up the condensed suspension into the original particle size.
2. Let the standard sit undisturbed for 5 minutes.
3. Invert two or three times before pouring the standard into a clean sample cell. Rinse the sample cell at least once with the bulk standard.
4. Eliminate any optical variances on the sample cell by using traditional preparation techniques (oiling and indexing the sample cell).
5. Fill the sample cell with the standard; cap the sample cell and the bulk solution.

For bulk solution <u>and</u> sealed sample cell standards:

6. Slowly invert the sample cell 2–3 times; let the sample sit undisturbed for 2–3 minutes.
7. The sample cell containing the standard is now ready for measurement.

For Frequently Used StablCal® Standards

Bulk solution (bottles) or sealed sample cell (vials) standards

These instructions apply to frequently used standards (daily or weekly usage).

Note: *These instructions apply to all StablCal Standards except the <0.1 NTU StablCal Solution (Cat. No. 26597). If you are using the <0.1 NTU StablCal Solution, follow the instructions on page 6.*

For bulk solution standards:

1. Invert the standard 20 times to mix.
2. Eliminate any optical variances on the sample cell by using traditional preparation techniques (oiling and indexing the sample cell).
3. Invert two or three times before pouring the standard into the sample cell. Rinse the sample cell at least once with the bulk standard solution.
4. Fill and cap the sample cell.

For bulk solution <u>and</u> sample cell standards:

5. Let the sample cell sit undisturbed for 2–3 minutes.
6. The sample cell containing the standard is now ready for measurement.

Using <0.1 NTU StablCal® Solution

Bulk solution (bottles) or sealed sample cells (vials)

This solution may be substituted for low-turbidity water when performing a calibration using StablCal Standards.

1. **Never shake or invert* this solution.** Do not generate any bubbles in the solution. Allow the solution to sit undisturbed for several minutes before use.**
2. Carefully pour the solution down the inside wall of the sample cell; this prevents any air bubbles from forming in the sample cell.
3. Immediately cap the sample cell and the bulk solution bottle.
4. Let the filled sample cell sit undisturbed for 2–3 minutes.
5. The sample cell containing the solution is now ready for measurement.

* If the solution is shaken, it can take several hours for all the bubbles to dissipate; therefore it is recommended to refill the sample cell with fresh, unshaken <0.1 NTU StablCal Solution.

** If the <0.1 NTU StablCal Solution (Cat. No. 26597) has been mixed recently, wait at least 10–15 minutes before using.

REPLACEMENT PARTS AND REAGENTS

StablCal Stabilized Formazin Turbidity Standards are available in sealed sample cells (vials) or in bulk solution (bottles). The sealed sample cells are supplied in Calibration Sets. The bulk solution is available in individual bottles or in Calibration Sets.

Description	Cat. No.
Cap, sample cell, Teflon® lined, 12/pkg	24018-12

StablCal® Stabilized Formazin Turbidity Standards

StablCal® Bulk Solution, individual bottles:

4000 NTU, 100 mL (according to Pharm Eur. 5.0/2.2.1)	28966-42
1800 NTU, 500 mL	26607-49
1800 NTU, 100 mL	26607-42
1000 NTU, 500 mL	26606-49
1000 NTU, 100 mL	26606-42
800 NTU, 500 mL	26605-49
800 NTU, 100 mL	26605-42
200 NTU, 500 mL	26604-49
200 NTU, 100 mL	26604-42
180 NTU, 500 mL	26603-49
180 NTU, 100 mL	26603-42
100 NTU, 500 mL	26602-49
100 NTU, 100 mL	26602-42
40 NTU, 1 L	27474-53
40 NTU, 1 L	27463-53
40 NTU, 3.78 L	27463-56
30 NTU, 100 mL (according to Pharm Eur. 5.0/2.2.1)	28970-42
20 NTU, 1 L	26601-53
20 NTU, 500 mL	26601-49
20 NTU, 100 mL	26601-42

18 NTU, 500 mL 26600-49
18 NTU, 100 mL 26600-42
18 NTU, 100 mL (according to Pharm Eur. 5.0/2.2.1)..... 28969-42
10 NTU, 500 mL 26599-49
10 NTU, 100 mL 26599-42
6 NTU, 100 mL (according to Pharm Eur. 5.0/2.2.1)..... 28968-42
5.0 NTU (5000 mNTU), 1 L..... 28775-53
3 NTU, 100 mL (according to Pharm Eur. 5.0/2.2.1..... 28967-42
1.0 NTU, 1 L 26598-53
1.0 NTU, 500 mL 26598-49
1.0 NTU, 100 mL 26598-42
0.80 NTU (800 mNTU), 1L..... 27884-53
0.50 NTU (500 mNTU), 1 L..... 26980-53
0.50 NTU, 100 mL 26980-42
0.30 NTU (300 mNTU),1 L..... 26979-53
0.30 NTU, 100 mL 26979-42
0.10* NTU (100 mNTU),1 L 27233-53
0.10* NTU, 100 mL 27233-42
<0.1 NTU, 1 L 26597-53
<0.1 NTU, 500 mL 26597-49
<0.1 NTU, 100 mL 26597-42

StablCal® Bulk Solution Sets For Low-Range Verification

0.10*, 0.30 and 0.50 NTU, 1L each 27163-00
0.10*, 0.30 and 0.50 NTU, 100 mL each 27146-00
0.10* NTU, 3.78 L 27233-56

* 0.10 NTU StablCal® Certified Standard is a standard between 0.10 and 0.15 NTU with a defined accuracy specification that is determined for each new lot of product.

For Hach Model Pocket Turbidimeter. (For this reagent set, the reagents must be purchased by individual catalog numbers.)

20 NTU, 100 mL 26001-42
1.0 NTU, 100 mL 26598-42

For Hach Model 2100P Portable Turbidimeter

<0.1, 20, 100 and 800 NTU, 500 mL each..... 26594-00
<0.1, 20, 100 and 800 NTU, 100 mL each..... 26594-10
<0.1, 20, 100 and 800 NTU, sealed vials..... 26594-05

For Hach Model 2100N/2100N IS Laboratory Turbidimeters

<0.1, 20, 200, 1000 and 4000 NTU, 500 mL each..... 26621-00
<0.1, 20, 200, 1000 and 4000 NTU, 100 mL each..... 26621-10
<0.1, 20, 200, 1000 and 4000 NTU, sealed vials..... 26621-05

For Hach Model 2100AN/ 2100AN IS Laboratory Turbidimeters

<0.1, 20, 200, 1000 and 4000 NTU, 500 mL each; and a 7500 NTU sealed vial 26595-00
<0.1, 20, 200, 1000 and 4000 NTU, 100 mL each; and a 7500 NTU sealed vial 26595-10
<0.1, 20, 200, 1000, 4000 and 7500 NTU, sealed vials..... 26595-05
3, 6, 18, and 30 NTU, sealed vial (according to Pharm Eur. 5.0/2.2.1)..... 28971-00
3, 6, 18, and 30 NTU, 100 mL each (according to Pharm Eur. 5.0/2.2.1)..... 28972-00

For Hach Model Ratio 2000/Ratio/XR Turbidimeters

18, 180 and 1800 NTU, 500 mL each..... 26592-00
18, 180 and 1800 NTU, 100 mL each..... 26592-10
18, 180 and 1800 NTU, sealed vials..... 26592-05

For Hach Model 1720E, 1720D, and 1720C Process Turbidimeters . (Includes sufficient standard for up to eight calibrations in a single session.)

<0.1 and 40 NTU, 1 L each....27487-00
<0.1 and 20 NTU, 1 L each....26596-00
<0.1 and 1.0 NTU, 1 L each....27488-00
Calibration Cylinder Assembly (required) 44153-00

For Hach Model 2100A Laboratory Turbidimeter

1.0, 10, 100 and 1000 NTU, 500 mL each....26591-00
1.0, 10, 100 and 1000 NTU, 100 mL each....26591-10
1.0, 10, 100 and 1000 NTU, sealed vials....26591-05

For Hach Model 18900 Ratio Turbidimeter

18 and 180 NTU, 500 mL each....26593-00
18 and 180 NTU, 100 mL each....26593-10
18 and 180 NTU, sealed vials....26593-05

For FilterTrak 660™ Laser Nephelometer

100 mNTU, 1 L 27233-53
300 mNTU, 1 L 26979-53
500 mNTU, 1 L 26980-53
800 mNTU, 1 L 27884-53
5000 mNTU, 1 L 28775-53
Calibration Kit, includes 1 L 800 mNTU, calibration body, and funnel 53364-00

For OptiQuant™ SST Suspended Solids and Turbidity Analyzer

800 NTU, 500 mL (2 required per calibration) 26605-49
Calibration Kit, includes:
calibration cylinder, two 800 NTU 500 mL, and probe bracket 57330-00



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