

COLOR WHEEL COMPARATOR TEST SILICA (5-50, 25-250 or 50-500 ppm)

COMPONENTS:

1 x 4005	Cylinder, Graduated, 50 mL (1 mL div.), glass
3 x 4030	Pipet, Calibrated 0.5 & 1.0 mL, plastic w/cap
1 x 4050	Dipper spoon, 0.5g, plastic
1 x 5416	Instruction
1 x 6003	Brush, Cell Cleaner
1 x 7081	Comparator Case
2 x 9016	Test Cell, Calibrated (2.5, 5, 7.5, 10, 11.5, 14, 15, 20 mL), glass, with stopper
1 x 9489	Color Wheel, Silica, 0-50ppm
1 x R-1305Q	Silica Reagent #4
1 x R-1305U	Silica Reagent #3*
1 x R-1306T	Silica Reagent #1**
1 x R-1306U	Silica Reagent #2

TO ORDER REPLACEMENT PARTS AND REAGENTS CALL TOLL-FREE
800-TEST KIT (800-837-8548).

PROCEDURE:

**CAREFULLY READ AND FOLLOW PRECAUTIONS ON REAGENT LABELS.
KEEP REAGENTS AWAY FROM CHILDREN.**

For 0-50 ppm Silica

1. Open the comparator case (#7081) and insert the color wheel (#9489) oriented so that the numbers are readable. Close the comparator.
2. Rinse and fill two test cells (#9016) to 11.5 mL mark with water to be tested.
3. Add a stopper to one cell and place it in the left position of the comparator, so that the cell markings are out of view.
4. Using a pipet (#4030), add 0.5 mL R-1306T Silica Reagent #1** to the second test cell. Add a stopper and mix by inverting the cell several times.
5. Remove the stopper from the second test cell. Using a separate pipet, add 0.5 mL R-1306U Silica Reagent #2.
6. Replace the stopper and mix by inverting the cell several times. WAIT 5 MINUTES.

7. Remove the stopper from the second test cell. Using an unused pipet, add 0.5 mL R-1305U Silica Reagent #3*.
8. Replace the stopper and mix by inverting the cell several times.
9. Remove the stopper from the second test cell. Using 0.5g dipper spoon (#4050), add 1 level dipper R-1305Q Silica Reagent #4.
10. Replace the stopper and mix by inverting the cell until Reagent #4 is dissolved. WAIT 1 MINUTE.
11. Place the cell in the right position of the comparator, so that the cell markings are out of view. (Fig. 1)
12. Look through the comparator while facing a light source.
13. Rotate the color wheel until the color matches. (Fig. 2)
14. Read the number displayed in the lower opening of the comparator. The number displayed is the concentration of silica (ppm). (Fig. 3)

For 12.5-250 ppm Silica

1. Open the comparator case (#7081) and insert the color wheel (#9489) oriented so that the numbers are readable. Close the comparator.
2. Rinse and fill graduated cylinder (#4005) to 10 mL mark with water to be tested.
3. Dilute to 50 mL mark with distilled, deionized, or silica-free water.
4. Transfer back and forth between the graduated cylinder (#4005) and a test cell (#9016) several times to mix.
5. Fill two test cells (#9016) to the 11.5 mL mark using this diluted sample.
6. Add a stopper to one cell and place it in the left position of the comparator, so that the cell markings are out of view.
7. Using a pipet (#4030), add 0.5 mL R-1306T Silica Reagent #1** to the second test cell. Add a stopper and mix by inverting the cell several times.
8. Remove the stopper from the second test cell. Using a separate pipet, add 0.5 mL R-1306U Silica Reagent #2.

Instr. #5416

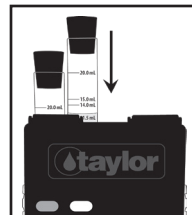


Fig. 1

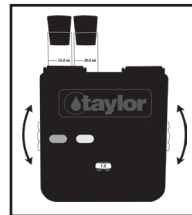


Fig. 2

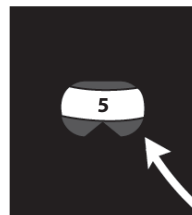


Fig. 3

(OVER)

- Replace the stopper and mix by inverting the cell several times. WAIT 5 MINUTES.
- Remove the stopper from the second test cell. Using an unused pipet, add 0.5 mL R-1305U Silica Reagent #3*.
- Replace the stopper and mix by inverting the cell several times.
- Remove the stopper from the second test cell. Using 0.5g dipper spoon (#4050), add 1 level dipper R-1305Q Silica Reagent #4.
- Replace the stopper and mix by inverting the cell until Reagent #4 is dissolved. WAIT 1 MINUTE.
- Place the cell in the right position of the comparator, so that the cell markings are out of view. (Fig. 1)
- Look through the comparator while facing a light source.
- Rotate the color wheel until the color matches. (Fig. 2)
- Read the number displayed in the lower opening of the comparator. Multiply the number by 5. The result is the concentration of silica (ppm). (Fig. 3)

For 25-500 ppm Silica

- Open the comparator case (#7081) and insert the color wheel (#9489) oriented so that the numbers are readable. Close the comparator.
- Rinse and fill graduated cylinder (#4005) to 5 mL mark with water to be tested.
- Dilute to 50 mL mark with distilled, deionized, or silica-free water.
- Transfer back and forth between the graduated cylinder (#4005) and a test cell (#9016) several times to mix.
- Fill two test cells (#9016) to the 11.5 mL mark using this diluted sample.
- Add a stopper to one cell and place it in the left position of the comparator, so that the cell markings are out of view.
- Using a pipet (#4030), add 0.5 mL R-1306T Silica Reagent #1** to the second test cell. Add a stopper and mix by inverting the cell several times.
- Remove the stopper from the second test cell. Using a separate pipet, add 0.5 mL R-1306U Silica Reagent #2.

- Replace the stopper and mix by inverting the cell several times. WAIT 5 MINUTES.
- Remove the stopper from the second test cell. Using an unused pipet, add 0.5 mL R-1305U Silica Reagent #3*.
- Replace the stopper and mix by inverting the cell several times.
- Remove the stopper from the second test cell. Using 0.5g dipper spoon (#4050), add 1 level dipper R-1305Q Silica Reagent #4.
- Replace the stopper and mix by inverting the cell until Reagent #4 is dissolved. WAIT 1 MINUTE.
- Place the cell in the right position of the comparator, so that the cell markings are out of view. (Fig. 1)
- Look through the comparator while facing a light source.
- Rotate the color wheel until the color matches. (Fig. 2)
- Read the number displayed in the lower opening of the front of the comparator. Multiply the number by 10. The result is the concentration of silica (ppm). (Fig. 3)

*WARNING: Silica Reagent #3 (R-1305U) contains 10% oxalic acid, a poison.

**WARNING: Silica Reagent #1 (R-1306T) contains 14.7% (w/v) hydrochloric acid, a corrosive acid.

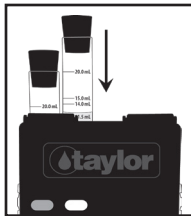


Fig. 1

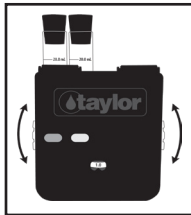


Fig. 2

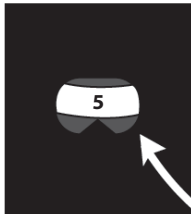


Fig. 3



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