

Carolina™ Solution Sheets

Lugol's Solution

Learn how to make Lugol's solution and about its many uses.

Materials

Potassium Iodide (item #883789)
Iodine Crystals (item #868984)
Distilled Water (item #858621)
Amber Glass Bottle (item #715759)
Stir Bar
Magnetic Stir Plate (item #701023)
Erlenmeyer Flask, 100-mL (item #731028)
Label

Don't want to make it yourself?

Find Lugol's solution at Carolina.com

Item Numbers

872793, 872795, 872797

Procedure

1. Add 12 g potassium iodide to 120 mL distilled water.
2. Add 6 g iodine crystals to above solution.

Notes

- First dissolve the potassium iodide and then the iodine crystals to ensure the iodine will go into solution.

Label Information

Lugol's Solution

Caution: Very corrosive; be extremely cautious when handling

Date Prepared: _____

Initials of Preparer: _____

Health Risk: 3

Flammability: 0

Reactivity: 2

Applications

Lugol's solution, like many iodine solutions, can be used for starch detection. Lugol's solution has also historically been used for numerous health issues such as gastroesophageal reflux disease and carcinoma in the esophagus. It has also been used as an antiseptic and preservative. It is also used as a cell stain.

Reference

Brandwein, P. F., and E. Morholt. 1986. *A sourcebook for the biological sciences*, 3rd ed. Orlando, FL: Harcourt Brace Jovanovich, 1986, p. 744.

Hawkins, Peter R., Jon Holliday, Amrit Kathuria, and Lee Bowling. 2005. Change in cyanobacterial biovolume due to preservation by Lugol's iodine. *Harmful Algae* 4 (6):1033–43.

Włodarczyk, Janusz. [Application of Lugol solution in the gastroesophageal reflux disease] [in Polish]. *Przegląd Lekarski* 64 (9):549–51.