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# Lugol's Solution

National Cancer Institute

## Source

National Cancer Institute. *Lugol's Solution*. NCI Thesaurus. Code C114292.

A solution composed of iodine and potassium iodide, which can be used as a reagent and antiseptic, with potential use in cancer diagnosis. The iodine in Lugol's solution selectively binds to alpha-1,4 glucans found in polysaccharides, such as glycogen. Lugol's solution reacts with glycogen in normal, healthy non-keratinized, squamous epithelium and the iodine-glucan complex stains the glycogen-containing cells dark brown. Cancer cells are devoid of glycogen, so these cells will stay unstained. The presence of cancer cells can be detected by the degree of staining and the neoplastic cells can be surgically removed. High-grade intraepithelial neoplasia has almost no glycogen-containing epithelium.