

## 60983 Kovac's Reagent for indoles (Indole Reagent according to Kovac)

For determination of the ability of microorganisms, primarily Enterobacteriaceae, to split indole (benzopyrrole) from the tryptophan molecule by tryptophanases. Tryptophanase present in e.g. *E. coli* cleaves tryptophan to indole and  $\alpha$ -aminopropionic acid. p-Aminobenzaldehyde present in the reagent builds with indole a cherry-red complex, soluble in alcohol, ether and chloroform. For the test is recommended to use media without glucose and a peptone with a high tryptophane content. Cat. No. 67309 contains Isoamyl alcohol and Cat. No. 60983 n-Butanol as solvent, they are more stable than amyl alcohol described in the older formulations.

### Composition:

n-Butanol  
Hydrochloric acid  
4-(Dimethylamino)benzaldehyde

### Directions:

Add 0.2-0.5 ml Kovac's Reagent to 5 ml of 24-48 hours old culture e.g. incubated in Tryptone Water (Cat. No. 70194). The incubation time can be reduced to 4 hours by inoculating more cell material in a smaller volume (e.g. 0.5ml).  
Shaking slightly to help extraction.

### Quality control:

Cultural response after 18-24 hours at 35°C in Tryptone Water (Cat. No. 70194). If a cherry-red coloration develops in less than a minute it will be considered a positive reaction and means microorganisms possess tryptophanase activity. A negative reaction shows no color change.

Test Organisms (ATCC)	Indole production
<i>Escherichia coli</i> (25922)	+
<i>Enterobacter aerogenes</i> (13048)	-

### References:

1. N. Kovacs, Eine vereinfachte Methode zum Nachweis der Indolbildung durch Bakterien., Z. Immunitats. Forsch. Exp. Ther., 55, 311 (1928)
2. H.H. Gadebusch, S. Gabriels, Modified Stable Kovacs's Reagent for detection of Indol., Am. J. Cli. Pathol., 26, 1373 (1956)
3. H.D. Isenberg, L.H. Sundheim, Indol Reactions in Bacteria., J. Bact., 75, 682 (1958)
4. J.F. McFaddin, Biochemical Tests for Identification of Medical Bacteria, 3rd ed., Lippincott Williams & Wilkins, Philadelphia (2000)

### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

