Nessler's Reagent

R017

Intended use

Nessler's Reagent is used for determination of Urea (as Ammonia).

Composition**

Ingredients	
Potassium iodide	50.0gm
Distilled water	50.0ml
Final pH (at 25°C)	12.4±0.1

Saturate with mercuric chloride solution until a permanent precipitate just appears. Add 200ml of sodium hydroxide (5mol/ litre). Make the volume to 1 litre with distilled water. Use the clear supernatant as the Nessler's reagent.
**Formula adjusted, standardized to suit performance parameters.

Directions

Emulsify a 24 hours old culture of organism to be tested for urease test in 0.5 ml substrate in a test tube containing 2% urea. Place the tube in a water bath at 37°C for 3 hours. Remove the tube and add 0.1 ml of Nessler's reagent and similar amount to the negative control and blank tubes. Read the results after 3 - 5 minutes after adding Nessler's Reagent. Both negative and control tubes must be absolutely colourless. When isolated colonies are to be examined, the volume of substrate is reduced to 0.3 ml and only one drop of Nessler's reagent is added. For detecting NH3 production in L-arginine breakdown: Remove a loopful from a 4 day L-arginine culture and place into 0.5 ml of ammonia free distilled water. Add 1 drop of Nessler's reagent. Run the same check on the control.

Principle And Interpretation

Bacteria, particularly those growing naturally in an environment exposed to urine may decompose urea by means of the enzyme urease. The occurrence of this enzyme can be tested by growing the organism in the presence of urea and testing for alkali (NH_3) production by means of a suitable pH indicator. An alternative method is to test for the production of ammonia from urea by means of Nessler's reagent (1) and/or to detect NH_3 production due to L-arginine breakdown (2,3).

Type of specimen

1. The specimen is any isolated colony on primary or subculture plates.

Specimen Collection and Handling

1.For clinical samples follow appropriate techniques for handling specimens as per established guidelines(4,5).
2.For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (6,7).
3.For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards.(8)
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use only. Read the label before opening the container. Wear protective gloves/protective clothing/ eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Performance and Evaluation

Performace of the product is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

IVD	In vitro diagnostic medical device
CE	CE Marking
30°C 10°C	Storage temperature
	Do not use if package is damaged
	HiMedia Laboratories Pvt. Limited, B /4-6 , MIDC, Dindori, Nashik MH www.himedialabs.com
EC REP	CE Partner 4U ,Esdoornlaan 13, 3951 DB Maarn The Netherlands, www.cepartner 4u.eu