

## ID indole TDA (ID-TDA)

Detection of indole production and TDA

## SUMMARY AND EXPLANATION

This reagent enables the detection in enterobacteria of indole production and the presence of a tryptophan deaminase (TDA). It allows presumptive differentiation of bacteria possessing these characteristics (1,2,3).

## PRINCIPLE

## Detection of indole production

Using colonies isolated on chromID™ CPS® agar (containing tryptophan), bacteria with a tryptophanase decompose the tryptophan and release indole. This reaction is revealed by a blue coloration after addition of reagent R1 (4,5,6).

## Detection of TDA

Using cultures in media containing tryptophan (urea-indole medium), bacteria with a tryptophan deaminase decompose the tryptophan and release indole-pyruvic acid. This reaction is revealed by a brown coloration after addition of reagent R2 (ferric chloride solution) (2, 6).

## PRESENTATION

## Ready-to-use medium

REF 56541

reagent R1: 1 x 2.5 ml dropper bottle

reagent R2: 1 x 2.5 ml dropper bottle

1 Package Insert provided in the kit or downloadable from [www.biomerieux.com/techlib](http://www.biomerieux.com/techlib)

## COMPOSITION

## Theoretical formula:

This medium can be adjusted and/or supplemented according to the performance criteria required:

## Reagent R1 \*

Dimethylaminocinnamaldehyde (DMACA) ..... 10 g  
Hydrochloric acid ..... 270 ml  
Purified water ..... 1 l

## Reagent R2 \*\*

Ferric chloride (FeCl<sub>3</sub>) ..... 100 g  
Purified water ..... 1 l

\* Signal word : **WARNING**

## Hazard statement

H315 : Causes skin irritation.

H319 : Causes serious eye irritation.

H335 : May cause respiratory irritation.

## Precautionary statements

P261 : Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 : Wear protective gloves/protective clothing/eye protection/face protection.

P305 + P351 + P338 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

\*\* Signal word : **DANGER**

## Hazard statement

H302 : Harmful if swallowed.

H315 : Causes skin irritation.

H318 : Causes serious eye damage.

H412 : Harmful to aquatic life with long lasting effects.

## Precautionary statements

P273 : Avoid release to the environment.

P280 : Wear protective gloves/protective clothing/eye protection/face protection.

P302 + P352 : IF ON SKIN: Wash with plenty of water.

P305 + P351 + P338 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

For further information, refer to the Safety Data Sheet.

## REAGENTS REQUIRED BUT NOT PROVIDED

- chromID™ CPS® agar (Ref. 43541 / 43549, Réf. 43821 / 43829).
- chromID™ CPS® agar / Columbia CNA + 5% sheep blood (Réf. 43463, 411617).
- Urea-indole medium (Ref. 55752).

## ADDITIONAL MATERIAL

- Object-holder slides.
- Paper disks.

## WARNINGS AND PRECAUTIONS

- **For *in vitro* diagnostic use only.**
- **For professional use only.**
- Refer to the hazard statements "H" and precautionary statements "P" indicated above.
- All specimens, microbial cultures and inoculated products should be considered infectious and handled appropriately. Aseptic technique and usual precautions for handling the bacterial group studied should be observed throughout this procedure. Refer to "CLSI® M29-A, *Protection of Laboratory Workers From occupationally Acquired Infections; Approved Guideline – Current Revision*". For additional handling precautions, refer to "Biosafety in Microbiological and Biomedical Laboratories - CDC/NIH – Latest Edition", or to the regulations currently in use in each country.
- Do not use reagents after the expiry date.
- Before use, make sure the tamper-proof seal on the bottle stoppers is intact.
- The performance data presented were obtained using the procedure indicated in this package insert. Any change or modification in the procedure may affect the results.
- Interpretation of the test results should be made taking into consideration the colonial and microscopic morphology and, if necessary, the results of any other tests performed.

## STORAGE CONDITIONS

- **The bottles can be stored at 2-8°C in their box until the expiry date.**
- After opening, the reagents can be stored in their bottles for 3 months at 2-8°C.

## SPECIMENS

The sample consists of colonies isolated on chromID™ CPS® agar or a culture in urea-indole medium.

## INSTRUCTIONS FOR USE

**Allow the bottles to come to room temperature.**

Refer to the package insert of the media used.

## READING AND INTERPRETATION

Refer to the package insert of the media used.

## QUALITY CONTROL

### Protocol:

The reagent activity can be tested using the following strains isolated on chromID™ CPS® agar:

- *Escherichia coli* ATCC® 25922™
- *Proteus mirabilis* ATCC® 12453™

### Range of expected results:

Strain	Indole	TDA
<i>Escherichia coli</i> ATCC® 25922™	+	
<i>Proteus mirabilis</i> ATCC® 12453™		+

## Note:

It is the responsibility of the user to perform Quality Control taking into consideration the intended use of the medium, and in accordance with any local applicable regulations (frequency, number of strains ...).

## PERFORMANCE

### Indole reagent (R1):

Performance of the indole reagent (R1) was evaluated using a total of 308 strains, composed of 50 *Escherichia coli* strains, 48 *Proteaeae* strains and 210 other bacteria inoculated on chromID™ CPS® agar.

After 24 hours of incubation, 69 out of the 70 expected strains produced a blue coloration on disks impregnated with reagent R1, which is characteristic of Indole production.

### TDA reagent (R2):

Performance of the TDA reagent (R2) was evaluated using 20 strains of enterobacteria.

Among the bacteria tested, all 6 expected strains made the medium turn brown, which is characteristic of the presence of a tryptophan deaminase.

## WASTE DISPOSAL









Unused reagents must be disposed of following procedures for hazardous chemical waste. Dispose of all used reagents as well as any other contaminated disposable materials following procedures for infectious or potentially infectious products.

It is the responsibility of each laboratory to handle waste and effluents produced according to their nature and degree of hazardousness and to treat and dispose of them (or have them treated and disposed of) in accordance with any applicable regulations.

## LITERATURE REFERENCES

1. CARRICAJA A., BOISTE S., THORE J. et al. – Comparative evaluation of five chromogenic media for detection, enumeration and identification of urinary tract pathogens. – *Eur. J. Clin. Microbiol. Infect. Dis.*, 1999, vol. 18, p. 796-803.
2. MAZOYER MA., ORENGA S., DOLEANS F. et al. – Evaluation of CPS ID2 medium for detection of urinary tract bacterial isolates in specimens from a rehabilitation center. – *J. Clin. Microbiol.*, 1995, vol. 33, p. 1025-1027.
3. NUNEZ M.L., DIAZ J., LORENTE I. et al. – Evaluation of CPS ID2 medium for diagnosis of urinary infections. – *Eur. J. Clin. Microbiol. Infect. Dis.*, 1995, vol. 14, p. 1111-1113.
4. HARREWYN L., BISSARDON O., MOUNIER M. et al. – Identification et numération rapide des germes urinaires sur boîte contenant des substrats chromogènes et fluorogènes – *Rev. Fr. Lab.*, 1990, vol. 212, p. 73-77.
5. RALOVICH B., IBRAHIM G.A.M., FABIAN A. et al. – "Beta-D-Glucuronidase (BDG) Activity of Gram-Negative Bacteria" - *Acta Microbiol. Hung.*, 1991, vol. 38, p. 283-291.
6. RICHARD C. – Techniques de recherche d'enzymes utiles au diagnostic de bactéries à Gram négatif – *Ann. Biol. Clin.*, 1978, vol. 36, p. 407-424.

**INDEX OF SYMBOLS**

Symbol	Meaning
	Catalogue number
	<i>In Vitro</i> Diagnostic Medical Device
	Manufacturer
	Temperature limit
	Use by date
	Batch code
	Consult Instructions for Use
	Date of manufacture

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**REVISION HISTORY**

## Change type categories

N/A	Not applicable (First publication)
Correction	Correction of documentation anomalies
Technical change	Addition, revision and/or removal of information related to the product
Administrative	Implementation of non-technical changes noticeable to the user
<b>Note:</b>	<i>Minor typographical, grammar, and formatting changes are not included in the revision history</i>

Release date	Part Number	Change Type	Change Summary
2015/01	03977J	Administrative	Creation of revision history Index of symbols
		Technical	Composition, Warnings and precautions


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