thermoscientific

Product Specification Sheet

Columbia CNA Aesculin Agar /
Brilliance™ UTI Clarity™

Intended Usage: Media for the presumptive identification of organisms occurring in urinary tract infections.

For professional use only.

	PB5267E
Version: 03	Revision Date: 04 November 2021

Thermo Scientific™ Columbia CNA Aesculin Agar / *Brilliance*™ UTI Clarity™

Form of Product	Poured plate
Storage	2 – 12°C, dark
Filling weight	17 g ± 5 %
Packaging	10 biplates wrapped in film
pH	
Columbia CNA Aesculin Agar	7.3 ± 0.2
Brilliance™ UTI Clarity™	7.0 ± 0.2
Appearance	
Columbia CNA Aesculin Agar	Flame red, opaque
Brilliance™ UTI Clarity™	Ivory, transparent
Shelf life	8 weeks
Intended Usage	Media for the presumptive identification of organisms occurring in urinary tract infections. For professional use only.
Technique	Depends on the different methods. For information see Specification Sheet for Thermo Scientific™ Oxoid™ CM1106.

Typical formulation* Side 1 – Columbia CNA Aesculin Agar	**g/l**
Special peptone	23.0
Starch	1.0
Sodium chloride	5.0
Nalidixic acid	0.005
Colistin	0.0075
Aesculin	1.0
Agar	10.0
Defibrinated sheep blood	70.0 ml

Typical formulation* Side 2 - *Brilliance*™ UTI Clarity™	**g/l**
Peptone	9.0
Chromogenic mix	17.0
Tryptophan	1.0
Agar	10.0

* Adjusted as required to meet performance standards.

Quality Control

1. Control for general characteristics, labelling and printing.

2. Contamination check
   ≥ 72 h @ 20 – 25 °C, aerobic
   ≥ 72 h @ 30 – 35 °C, aerobic

3. Microbiological control

Side 1- CNA Aesculin

Positive Controls	Growth
Inoculum 10^3-10^4 colony forming units (cfu), qualitative, control medium COL+SB Incubation conditions: 24 h @ 36 ± 1°C, aerobic	
Staphylococcus aureus ATCC® 25923™	Good growth, white shiny colonies.
Streptococcus agalactiae ATCC® 13813™	Good growth, grey shiny colonies, aesculin negative.
Enterococcus faecalis ATCC® 29212™	Good growth, light grey colonies, aesculin positive.
Negative Control	**Growth**
Inoculum 10^4-10^5 cfu, qualitative, control medium COL+SB Incubation conditions: 24 h @ 36 ± 1°C, aerobic	
Escherichia coli ATCC® 25922™	No growth.

Side 2 – *Brilliance* UTI Clarity™

Positive Controls	Growth
Inoculum 10^3-10^4 cfu, qualitative, control medium COL+SB Incubation conditions: 24 h @ 36 ± 1°C, aerobic	
Escherichia coli ATCC® 25922™	Good growth, rose shiny colonies, indole positive.
Proteus mirabilis ATCC® 29906™	Good growth, cream colonies, brown halo, indole negative.
Enterococcus faecalis ATCC® 29212™	Good growth, turquoise shiny colonies.
Klebsiella oxytoca ATCC® 13182™	Good growth, large blue shiny colonies.
Staphylococcus aureus ATCC® 25923™	Good growth, white colonies.

ATCC® registered trademark of American Type Culture Collection.

Description of Columbia CNA Aesculin Agar

On Columbia CNA Aesculin Agar only gram-positive organisms and yeasts will grow. Growth of gram-negative bacteria is suppressed.

Columbia CNA Aesculin Agar detects the following reactions:

1. resistance/susceptibility against colistin
2. resistance/susceptibility against nalidixic acid
3. aesculin hydrolysis (positive: dark halo around the colony in UV light at 366 nm)
4. haemolysis reaction with defibrinated sheep blood
5. reaction in CAMP test (positive: CAMP reaction with *S. aureus* e.g. ATCC® 33862).

Description of *Brilliance*™ UTI Clarity™

Brilliance™ UTI Clarity™ medium is suitable for the enumeration of most organisms which frequently cause urinary tract infections. *E. coli*, enterococci, *Proteus-Morganella-Providencia* (PMP) group and *Klebsiella-Enterobacter-Serratia* (KES) group may be detected directly from urine. Specific and clearly distinguishable colour reactions on the transparent medium give a presumptive identification. Different organisms from mixed cultures may be easily and reliably identified.

Chromogenic U.T.I. Medium detects the following enzymes:

1. ß-galactosidase (positive: pink colonies)
2. ß-glucosidase (positive: blue colonies)
3. tryptophan deaminase (positive: brown halo)
4. phenylalanine deaminase (FeCl3 test positive: brown-green)

Inoculation

1. Inoculate plates as usual with urine or isolated colonies.
2. Incubate 18 h @ 36 ± 1°C.

3. Interpretation

Colony morphology (on *Brilliance*™ UTI Clarity™)	Additional Identification		Result
Pink/rose shiny colonies			***E. coli***
			A small percentage of *E. coli* that show no ß-GAL activity produce shiny colourless colonies
Light blue small colonies	growth on Columbia CNA aesculin hydrolyzation	growth, aesculin **+**	**Enterococci**
		no growth, aesculin -	additional identification required
Dark blue-purple large colonies			***Klebsiella-Enterobacter-Serratia* group (KES)**
Brown with brown halo	$FeCl_3$ test (drop 10% aqueous solution of $FeCl_3$ onto the colony)	Phenylalanine deaminase **+**	***Proteus-Morganella-Providencia* group (PMP)** (ß-glucosidase negative strains)
Blue with brown halo	$FeCl_3$ test	Phenylalanine deaminase **+**	***Proteus-Providencia* group** (ß-glucosidase positive strains)
NOT pink, blue or brown			additional identification required

Precautions

Growth of staphylococci may be reduced on *Brilliance*™ UTI Clarity™ medium. A spot indole test can still be performed by using either Kovac's Indole reagent or DMACA (Dimethylamino-cinnamaldehyde 1%)