

Ox bile, dried

Ox bile is used in the preparation of selective media for the detection and enumeration of Gram negative bacteria particularly Enterobacteriaceae, Salmonella and Gram- positive enterococci

Mode of Action

Ox bile is prepared by concentration, purification and spray drying of fresh bile.

Ox bile is a complex mixture of bile free and conjugated bile salts. The bile salts in fresh bile are mainly totally conjugated as peptides formed from bile acid, glycine or taurine. The selective activity of fully conjugated bile acids is less than that of free acids. Deoxycholic acid is the most active of the bile acids. Bacterial enzymes hydrolyse bile conjugates to the more inhibitory free bile acids. The inhibitory activity of ox bile increases in the presence of phosphate or citrate. These substances chelate magnesium. Magnesium chloride can decrease the selectivity.

Ox bile inhibit most Gram-positive bacteria without affecting the growth of Gram-negative enteric bacilli.

Ox bile is also used for the differentiation of pneumococci (bile soluble) from streptococci (bile insoluble).

Typical Analysis

Colour powder	light beige
Colour in solution	yellow-beige
Solubility (2% in BGB Broth)	total
pH (5% in water)	5.5-7.5
Bile salts (cal. as cholic acid USP)	≥45%
Total ash (800 °C)	≤15%
Water (acc. to K. Fischer)	≤5%
Unsoluble matter (in 80% ethanol)	≤1%

Ordering Information

Product	Merck Cat. No.	Pack size
Ox bile, dried	1.03756.0500	500 g

Quality control

Test strains	Growth
Staphylococcus aureus ATCC 25923	+
Staphylococcus aureus ATCC 6538P	+
Enterococcus faecalis ATCC 11700	+
Listeria monocytogenes ATCC 19113	+
Escherichia coli ATCC 8739	+
Klebsiella pneumoniae ATCC 13883	+
Salmonella typhimurium ATCC 14028	+