

Lactulose Assay Kit

Product Information

Product Overview

Thermal treatment of milk is an essential process in the dairy industry. Various heating regimens can be employed, and thus in some cases it becomes necessary to determine thermal history accurately. This can be achieved by quantitative measurement of lactulose, a disaccharide comprising D-galactose and D-fructose that is only produced from the common milk sugar lactose at elevated temperatures. In raw milk the level of lactulose is very low. However, as heat treatment increases this sugar can eventually reach ~ 2 g/L (in the case of UHT milk for example). This kit is suitable for the measurement of lactulose in milk-based products such as fresh milk, UHT milk, evaporated milk and powdered milk. However, this kit is unsuitable for the measurement of lactulose in samples that have been artificially sweetened, such as condensed milk, where the "free fructose" to lactulose ratio is extremely high.

Size

50 assays per kit

Storage

2-8°C

Shipping

On Ice

Kit Components

β-Galactosidase suspension (3 mL). Stable for > 2 years at 4°C.

Glucose oxidase and catalase, lyophilised powder. Stable for > 2 years below -10°C.

Buffer (6 mL, pH 7.6) plus sodium azide (0.02% w/v) as a preservative. Stable for > 2 years at 4°C.

NADP+ plus ATP. Stable for > 2 years at 4°C.

Hexokinase plus glucose-6-phosphate dehydrogenase suspension, 2.2 mL. Stable for > 2 years at 4°C.

6-Phosphogluconate dehydrogenase suspension (2.2 mL). Stable for > 2 years at 4°C.

Phosphoglucose isomerase suspension (2.2 mL). Stable for > 2 years at 4°C.

Lactulose Assay Kit

Lactulose (0.1 mg/mL) plus D-fructose (0.05 mg/mL) standard solution (5 mL). Stable for > 2 years; store sealed at 4°C.

Materials Required but Not Supplied

Sodium phosphate buffer

Sodium acetate buffer

TEA buffer

Concentrated Carrez I solution

Concentrated Carrez II solution

Sodium hydroxide

Octanol

Hydrogen peroxide