



MILK FRAUD/BOVINE RENNET WHEY ELISA (5171BRW)

General

Bovine Rennet Whey (BRW) is a by-product of cheese production from cow milk. Adulteration of skimmed milk powder with BRW is cost attractive however illegal. The EuroProxima Milk Fraud/BRW ELISA detects an epitope located on the glycomacropeptide (CMP) part of kappa-casein. This CMP is released during cheese production and remains as waste product in the curd. CMP detected in milk powder is a sign for fraudulent mixing.

The **Bovine Rennet Wey ELISA** is a competitive enzyme immunoassay based on antibodies directed against κ -casein.

Kit characteristics

Microtiter plate:

96 wells
12 x 8 Breakapart

Antibody cross-reactivity:

Cow's κ -casein	100%
Buffalo's κ -casein	100%
Other bovine caseins	0%
Other species caseins	0%

Conjugate:

Mab-HRP stabilized

Standard range (ready-to-use)

0, 0.1, 0.25, 0.5, 1.0, 2.5 $\mu\text{g/ml}$

References

1. Haasnoot W, Sajic N, Doorn Essers K, Streppel L, Verheijen R. (2014) ELISA for Raw and Heat-Treated Cow's and Buffalo's Milk in the Milk of Other Species and Sources. Advances in Dairy Research Volume 2, Issue 2,1000118.
2. Bremer MGE, Kemmers-Voncken AEM, Boers EAM, Frankhuizen R, Haasnoot W (2008) Enzyme-linked immunosorbent assay for the detection of bovine rennet whey powder in milk powder and buttermilk powder. International Dairy Journal 18, 294-302.

Assay characteristics

BRW can be detected at a level of 0.1% in goat's or sheep's milk after a 1:100 dilution of a sample. BRW added to bovine milk or milk powder can be detected down to a level of 1%.

Procedure

κ -casein is coated to the wells of the microtiter plate. Conjugated antibody, samples and standards are added and incubated for one hour at 20°C - 25°C. After a washing procedure ready-to-use substrate is added and incubated for 30 minutes at 20°C - 25°C. The reaction is stopped and the absorbance is read in a spectrophotometer at 450 nm.

EuroProxima's user-friendly software converts the measured optical density into the concentration of the metabolite in the starting material.