

Application of HY-LiTE[®] in Milk Roadtanker Transports

Background:

Milk is collected from farms and transported between smaller “loading stations” and the big dairy processing plants by large road tankers.

These are cleaned between each new load taken on board, and effective cleaning is important to avoid contamination of the new load of milk from old residues in the tanker.

HY-LiTE[®] is routinely used by milk transport companies for sanitation monitoring after the tankers have been cleaned.

The cleaning process used is mainly a CIP process, but a few parts of the tankers are known not to be effectively cleaned by the CIP system, and should be cleaned manually.

The Need:

Monitoring of the cleaning process is part of Quality Assurance, securing that the product (milk) in the tankers is not contaminated during transport.

Documentation of proper cleaning of the tanker can be very important, particularly in cases where the tanker is owned by a different company from the dairy.

If the dairy buying the milk finds high levels of contamination in the milk, the transport company will want to have documentation showing that the contamination did not occur during transport, but must have originated from the farm.

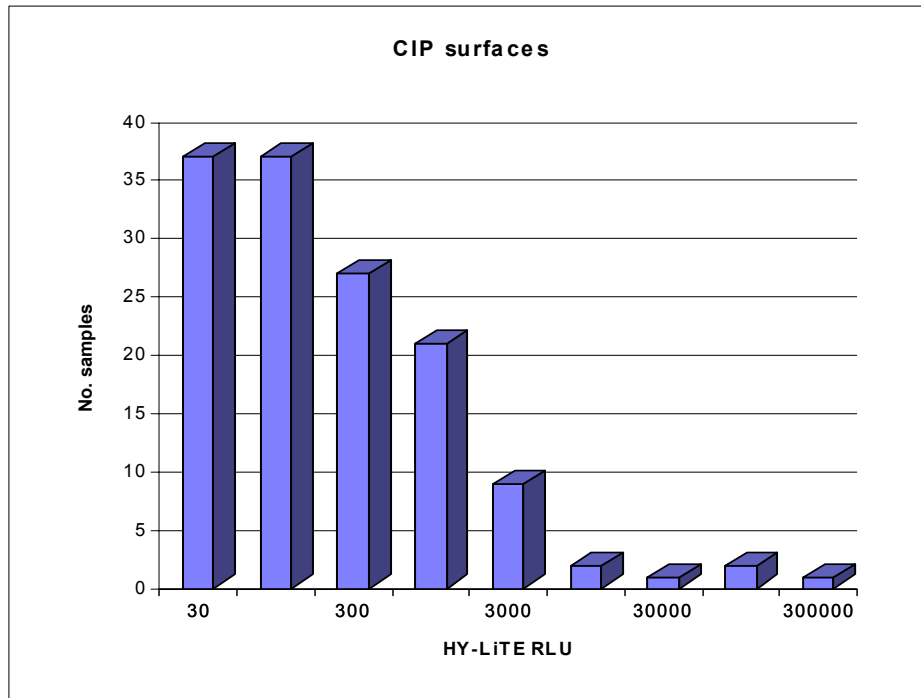
Typical measuring sites:

Measurement	Type of cleaning
Internal surface of manway lid	CIP
Surface of manway lid rubber seal	Manual
Internal surface of tanker roof	CIP
Internal surface of milk inlet (AEV)	Manual
Internal surface of milk outlet	CIP
Internal surface of flexible hose	Manual
CIP rinse water from last rinse cycle	(CIP)

Measurement results:

Good CIP cleaning of milk tankers have usually been found to give results of less than 250-300 RLU. Some of the manually cleaned surfaces such as the rubber seal in the lid may often be found to be somewhat higher, particularly if the rubber seal is worn when it becomes very difficult to clean satisfactorily.

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Typical PASS/FAIL limits:

100 RLU as PASS-Limit and 300 RLU as FAIL-Limit seem to fit most operations.

Note:

The above mentioned RLU values (relative light units, as indicated on the display) and the selected pass and fail limits are only examples. The limits should be individually fixed according to the type of product and the hygiene requirements.