

High Purity Cleaning Procedures

Since sanitising programmes have been commonly established, cleaning and sanitising procedures have to be developed for all food processing equipment. The objective of cleaning and sanitising food contact surfaces is to remove food (nutrients) which bacteria requires so that it can grow, and to kill bacteria that already exists.

Cleaning definitions

- Clean: Free from dirt, stain, or impurities and generally unsoiled
- Sanitised: Free from elements that endanger health, reduction of micro-organisms
- Desinfect: Refers to inanimate objects and the destruction of all vegetative cells (not spores)
- Sterilize: Refers to the statistical destruction and removal of all living organisms

ERIKS has wide ranging experience in material and product design compatibility to overcome problems in the cleaning processes used in the food, beverage and pharmaceutical industries.

Manual cleaning procedures

These procedures could be done by clean-up personnel, using:

- buckets, brushes and hoses or
- HPLV-Systems (High Pressure Low Volume) via spray wands or
- by foaming (cleaning primarily by chemical action)

Mechanical cleaning procedures

System uses an agitated tank to clean components (equipment parts and short section of piping) disassembled and placed in the tank.

CIP (Clean-in-Place)

This cleaning process is usually accomplished via chemical action based on spray or pressure recirculation of the flush, wash, and rinse solutions under controlled conditions of time, temperature and chemical concentration. It involves the washing of processing and storage tanks, the piping systems and integrated equipment.

SIP (Sterilization-in-place)

The objective is to sterilize all sterile product contact equipment at its point of use to eliminate or reduce the need for aseptic additions or connections.

Chemical	Example	Concentration	Temperature °C	Time	Cleaning procedure
Chlorinated alkalies	Mild solution of caustic soda	max. 0,5%	55-70	5-22	CIP

Acidified rinse	Post rinse, fresh water, acid solution	pH 5,5-6,0	RT	-	CIP
Strong alkalies	Caustic soda	0,5-5%	up to 90	45-90	CIP
Strong acids	Phosphoric acid, nitric acid	pH-2	75-90	20-30	CIP
Sanitiser	Sodium hypochlorite	200 ppm active chlorine	cold	a couple of	CIP
Hot water	-	-	80-90	-	CIP
Steam	-	-	+130	-	SIP

ERIKS Tools



This is a printed version of Solutions-In-Plastics.info of ERIKS nv.
© ERIKS nv, 2013.