

Inking/Blackening

Inking, commonly referred to as blackening, is identified by black residue on rubber or plastic parts, as well as black or brown stains on stainless steel.

Inking is generally caused by sanitizing with excessive amounts of chlorine or detergent containing large amounts of chlorine solutions, as well as failing to acid-rinse after each milking. The excessive chlorine causes a reaction between the chlorine or chlorinated compound and the rubber. Contact with caustic soda when improperly dissolved or diluted can also cause inking. Methods for correcting a protein buildup problem can create an inking problem.

Replacing rubber parts and cleaning with an acid wash is the best way to remove inking. If this does not remove the inking, stained equipment should be replaced (including stainless). Replacing the affected rubber parts as soon as possible will help control the problem.

Inking can be prevented. Be sure that the proper amount of chlorine sanitizer is being used. Proper dry storage, as well as proper installation, is also key for the prevention of inking.

Wetting Agents

Wetting agent buildup appears blue in color and is caused by poor or inadequate rinsing.

Wetting agent buildup can be removed during initial cleanup by properly and sufficiently rinsing equipment. To prevent buildup, use proper cleaning compounds and properly rinse all equipment.

Factory Soil

Factory soil buildup can appear in many different forms including grease, dirt, black deposits or even rusting. Soil buildup is commonly the result of improper initial cleanup or, often times, no cleanup. Factory soil can be removed simply by initial cleanup. To prevent buildup, thoroughly clean all equipment prior to initial use.

Corrosion

Corrosion is a common problem with dairy equipment. Corrosion often appears as rust or often times pitting in equipment.

Corrosion happens in several different ways. Iron, tramp metal particles, improper chemical usage and freezing of sanitizing solution on the bulk tank can create problems with corrosion. "Green" pads or more aggressive abrasives can/will cause scratching to stainless steel surfaces.

Removal of corrosion can be tricky. Using an acid wash and an abrasive action can sometimes remove the damage. For extreme corrosion, repolishing/buffing, or repassivation may solve the problem.

Corrosion can be prevented by using proper cleaning procedures and passivating acid rinses.

Etching

Etching, commonly mistaken for corrosion, appears as pitted and white discoloration "embedded" in stainless steel surfaces. Often this is caused by improper use of chemicals including the wrong products.

Removal of etching is only possible by repolishing or repassivation of affected equipment.

Like corrosion, etching can be prevented by using proper cleaning procedures and passivating acid rinse.

Yellowing

Yellowing, as its name suggests, is the yellowing of equipment. Yellowing can occur from old age of equipment, improper use of iodophor or from hand soil stains. Unfortunately, the only way to remove yellowing is by replacing the affected equipment. Yellowing can be prevented by proper product application.

Red Staining

Red stains on equipment are caused by *Serratia marcescena*. This type of staining can not be removed. To prevent red staining, proper cleaning procedures must be practiced on a regular basis.

