

Technical Comment

To: Sonya Nicol
Fax No:
From: Ewen Rodway
Date: Thursday, 9 May 2019
File Reference: Pypers Produce
Subject: *Pypers Produce re Sanitiser Use*



Environment Southland is the brand name of Southland Regional Council

Cnr North Rd & Price St, Private Bag 90116
Invercargill New Zealand
Phone 03 211 5115 Fax 03 211 5252
Tollfree (Southland only) 0800 76 88 45
Email service@es.govt.nz
Web site www.es.govt.nz

Comment:

Hi Sonya

Given there is no information supplied on the quantities of sanitiser used or the quantity of water it is diluted into it is impossible to assess the likely environmental risk in quantitative terms. The sanitiser in use is a sodium hypochlorite solution a.k.a. chlorine bleach. When added to the wash water the sodium hypochlorite disassociates in water to form hypochlorite, sodium hydroxide and hydrogen ions. Depending on the pH the hypochlorite ion subsequently reacts with hydrogen ions in the water to form hypochlorous acid. It is this hypochlorous acid that is the most active sanitising agent. The bulk of active chlorine present in the wash water will be rapidly converted to inorganic chloride (low risk to environmental health). Some will combine with amino-nitrogen forms to produce N-Chloramines that will more slowly decay to chloride. Because of the likely high C:Cl ratios in the wash-water (dirt present) there is potential for the generation of chlorinated organic compounds to form.

Provided the applicants are following industry standards on the use of this disinfectant then it is expected that the effect on the environment is likely to be negligible. The effects are somewhat self-regulated as over-dosing would result in negative effects to the vegetables. I do not consider that further investigation needs to be undertaken at this stage.

Kind regards
Ewen