

CITRAN 1

FRUIT & VEGETABLE SANITISER

TECHNICAL BULLETIN

Citran1 - Fruit & Vegetable Sanitiser is a certified organic, powerful non-corrosive sanitiser that is derived from natural ingredients.

Used for sanitising fruit & vegetables & hard surfaces.

Efficacy Citran 1

- Safe for food contact situations and is effective against a wide range of human pathogens including salmonella, E coli, listeria.
- Active components have been independently verified as suitable for application directly to fruit and vegetables.
- Does not poison the organism but acts by destroying the cellular membrane of micro-organisms (cell wall intrusion).

When used at recommended label rates, Citran 1 will kill 99.99% of germs to the ARTG standard test for commercial grade disinfection.*

Effectiveness of Citran 1 against Fusarium Chlamydospores

Treatment	Contact Times *	No soil # colonies	With Soil # colonies
Control (water + Fusarium)	0	659.3	791.6
	5 minutes	684.6	787
	30 minutes	597.2	785.7
	24 hours	347.3	782.4
Citran 1 (1 : 10 dilution)	0	0.4	0
	5 minutes	0	0
	30 minutes	0	0
	24 hours	0	0
Farmcleanse (1:10 dilution)	0	17.8	11.2
	5 minutes	8.2	5.7
	30 minutes	9.4	7
	24 hours	1.2	1.3

Note:

- Conducted by Dept of Agriculture & Fisheries (Qld DAF)
- Chlamydospores will survive for up to 30 years in soil and are considered the main long term infection source.
- "Due to the seriousness of the disease (Panama) to the banana industry, we would not recommend the use of a product unless undetectable levels (zero) were achieved in this bioassay." - Qld DAF

* Time is the sampling time. The samples are incubated for 48 hours and then # colonies reported.

Specifications

All natural certified organic input.

Active Components	Octanoic acid, bioflavonoids (bitter orange extract)
Water Quality	Suits a wide pH range: 5-8 Temperature up to 60 deg C Dilute with potable water

Rates

Fruit & Vegetable Dip and Spray

- 2.5ml per litre (0.25% solution) - 5 minute contact time;
- 5ml per litre (0.5% solution) - 1 minute contact time;

May foam in high pressure sprays.

Hard surfaces

- Commercial Grade Sanitiser - 20ml per litre (2% solution)
- Floors, walls
- Commercial Grade Disinfection - 50ml per litre (5% solution)
- Processing equipment

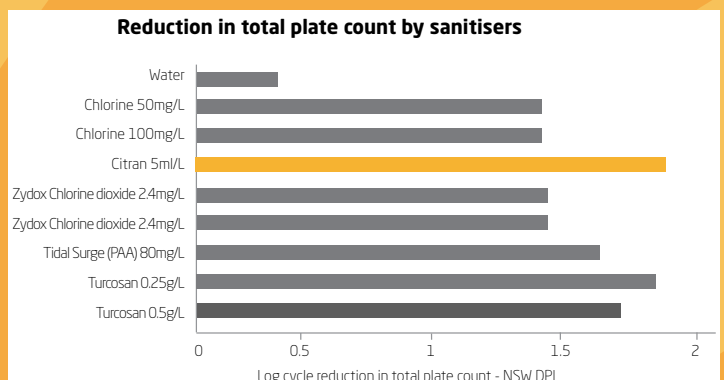
Biosecurity

- 50ml/L (5% solution)
- Sanitising vehicles, agricultural equipment, foot baths

Cool Room Fogging

- Produce Present - 5ml per litre
- Empty - 20ml per litre

* Option C Method



Test Results (1 minute dip in Citran 1 - 0.5% solution)

Tomatoes



Citran Untreated

Citran Untreated

17 days post treatment

24 days post treatment

Pears



Citran

Untreated

Citran

Untreated

24 days post treatment

Testing for Monitoring Citran Concentrations

Equipment

Citran Kit includes:

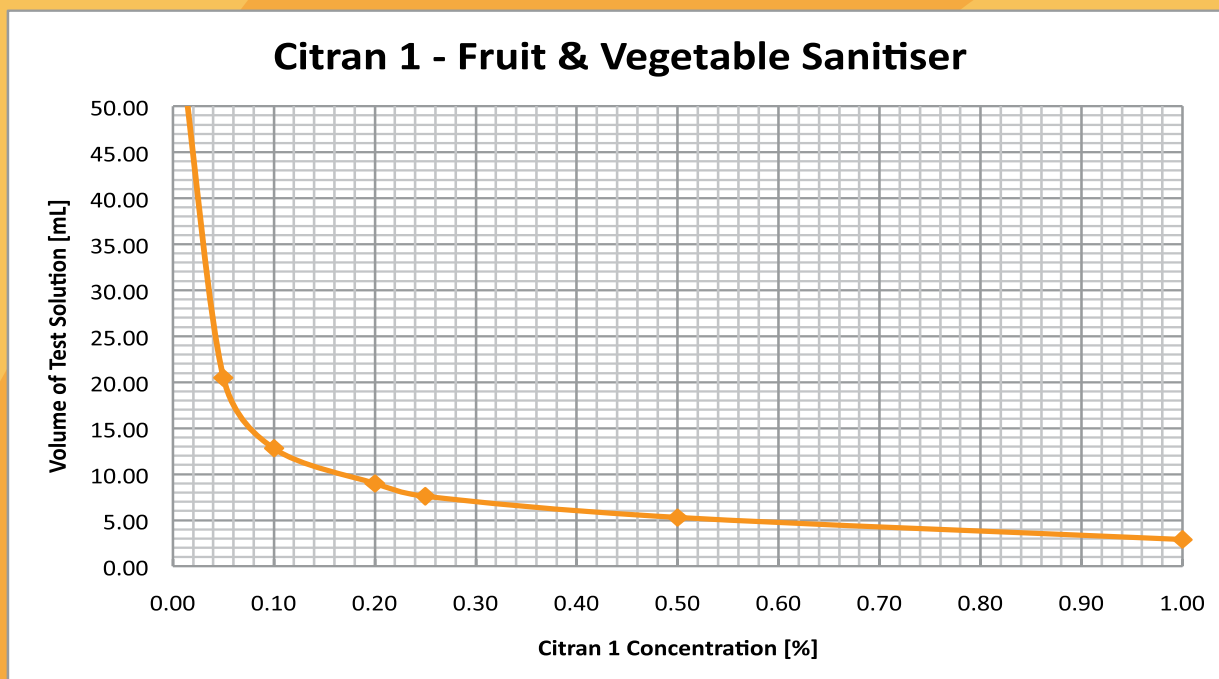
Citran Test Reagent; 250ml flask; 100ml beaker; 5ml syringe; 1ml disposable eye dropper

Filtered or deionised water required.

Method

1. Add 50 ml distilled water to flask.
2. Add 2 drops of Citran Test Reagent using the pipette and swirl to mix. Solution should be a light purple or pink colour. (Replace test reagent lid immediately after use.)
3. Fill beaker with Citran solution to be tested.
4. While gently swirling flask, add Citran solution from beaker with syringe until colour changes from purple/pink to clear. Add in lots of 1-2ml to ensure a fast reaction and distinct end point.
5. Record amount of Citran solution added.

Concentration of Citran 1 is determined using the graph below or spread sheets supplied with kit.



Use volume of test solution (ml) assessed using methodology above & read off concentration's %. Adjust dip solution accordingly.