

THE PROFESSIONAL'S CHOICE

Intercid®



Salmonella Control

Intercid is a general disinfectant that combines rapid kill of bacteria, fungi and viruses. It is effective even in the presence of organic matter and biofilm. It has been independently tested and approved under the German DVG, UK's DEFRA and the new European schemes

How does Intercid compare with other disinfectants in disinfecting against Salmonella?

In 2011* and again in 2017** the Animal and Plant Health Agency (APHA) and its predecessor ran a series of tests to compare common disinfectants through a series of tests specifically designed to copy on-farm conditions.

The target was to see which products could eliminate salmonella successfully from porous surfaces (dry model) and in solution (wet model). This simulated their use on farm surfaces and in footbaths.

(Note: Intercid = Tad Cid)



2011 Veterinary Laboratories Agency (VLA) tests

The results for disinfectants against Salmonella Enteritidis (SE) in the "dry model" using hen faeces are shown in Table 1 below:

Table1 DRY MODEL RESULTS HENS FAECES (SE data)

Product Tested	Ranking*	Multiple of General Orders Concentration		
		2	1	0.5
Intercid (TAD CID)	1	0	0	0
Formalin	1	0	0	0
Interkokask	2	0	0	3
GPC8	3	0	0	6
Farm Fluid HD	4	0	6	8
Virocid	5	5	6	9
Ambicide	5	4	7	9
Macrolin 500	6	4	9	9
Virkon S	7	8	9	9
Tego2001	7	8	9	9
Virudine	7	8	9	9
Hyperox	8	9	9	9
Sorgene 5	8	9	9	9

The trial showed that Intercid and formalin were the only two products that disinfected SE at all 3 concentrations when it was mixed with hen faeces, adsorbed onto wooden dowels and dried.

This is a tough test for any disinfectant to pass, but Intercid killed SE in all 9 samples at 2x, 1x and 0.5x the General Orders concentrations.

Salmonella Samples Killed	Disinfected
Salmonella Samples Living	Infected

*Ranking based upon the total count of infected samples at 3 General Order Concentrations tested.

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The test was repeated using turkey faeces and *Salmonella Typhimurium* (ST) as the test organism. The results are shown in Table 2:

Table 2 DRY MODEL RESULTS TURKEY FAECES (ST data)

Product Tested	Ranking*	Multiple of General Orders Concentration		
		2	1	0.5
Intercid (TAD CID)	1	0	0	1
GPC8	2	0	0	5
Interkokask	3	0	0	7
Virocid	4	4	5	5
Hyperox	5	-	7	9
Virkon S	6	4	6	7
Tego2001	7	5	8	9
Zal Perax	8	8	7	9
Virudine	9	8	9	9
Sorgene 5	10	9	9	9

In this experiment Intercid killed all the ST at 2x and 1x General Orders concentration. At 0.5x General Orders (GO) it killed 8 out of 9 (89%) of the test samples of ST.

Salmonella Samples Killed	Disinfected
Salmonella Samples Living	Infected

*Ranking based upon the total count of infected samples at 3 General Order Concentrations Tested.

The "wet model" reproduces the conditions in a footbath where organic matter (hen faeces) is in solution

Table 3 WET MODEL RESULTS HEN FAECES (SE data)

Results at DEFRA General Orders Concentration	Ranking*	Time (Hours)		
		0.5	2	4
Interkokask	1			
GPC8	1			
Farm Fluid HD	1			
Intercid (TAD CID)	2			
Virkon S	2			
Tego2001	2			
Virocid	3			
Macroline 500	3			
Ambicide	3			
Formalin	3			
Hyperox	4			
Sorgene 5	4			
Virudine	4			

In this test Intercid completely eliminated SE in less than 2 hours from the solution.

Salmonella Samples Killed	Disinfected
Salmonella Samples Living	Infected

*Ranking based upon the number of disinfected samples across 3 time periods



Table 4 WET MODEL RESULTS TURKEY FAECES (SE data)

Results at DEFRA General Orders Concentration	Ranking*	Time (Hours)		
		0.5	2	4
Interkokask	1			
Intercid (TAD CID)	2			
GPC8	2			
Tego2001	2			
Virocid	2			
Virkon S	3			
Zal Perax	4			
Sorgene 5	4			
Virudine	4			

Once again, Intercid completely disinfected SE from the organic matter (turkey faeces) solution, in less than 2 hours.

The only product to disinfect at all times in both wet models was Interkokask used at 2% solution.

Salmonella Samples Killed	Disinfected
Salmonella Samples Living	Infected

*Ranking based upon the number of disinfected samples across 3 time periods

2017 Animal and Plant Health Agency (APHA) UK tests

The series of tests carried out by the APHA in 2017 were centred around the needs of the pig farmer. A series of tests were conducted which showed the disinfectant's efficacy in a wide range of circumstances, including a surface contamination test in which Intercid was the only product to consistently eliminate salmonella at its General Orders concentration, and eliminated 100% of salmonella in the pig faecal suspension model at General Orders.

The Biofilm test (Table 5) was an interesting and important test as it demonstrated the ability of disinfectants to work in the presence of biofilms. Only Intercid and Interkokask demonstrated an ability to kill monophasic S. Typhimurium when protected by a sustained biofilm build-up of more than 3 weeks.

Table 5

Disinfection and Biofilm	Ranking*	Score indicates the presence of monophasic S Typhimurium on disinfected surfaces protected by biofilms																								
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Intercid (TAD CID)	1				1																					
Interkokask	1																									1
Virophor 2.8%	2										6															2
Virocid	3				2			1			4															3
Bioshield	4										6									2						3
GPC8	5									3		4								2						3
Virex	6				4				3		6									3						1
Farm Fluid HD ROW	7								6		6									6						5
Fam 30	8				1				6		6									6						6
Virkon S	9				4				5		6									6						5
Hyperox	10				3				6		6									6						6
Bi-oo-cyst	11				4				6		6									6						6
Multides-GA	11				4				6		6									6						6
Kickstart	12	1			5				6		6									6						6

*Ranking based upon total scores (0-6) over a 25 day test period

Biofilm Buildup (min --> max)	Disinfected.....Contaminated					
		1	2	3	4	5

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This test, and those from 2011 show that all disinfectants do not perform the same even if their active ingredients seem similar. Intercid has proved to be reliable as a disinfectant in all types of farms from poultry, pig, beef or other animal species. Its excellent activity against salmonella is mirrored in its efficacy against viruses and fungi. If you'd like to find out more about these tests, the references are listed at the end of the product sheet.

References:

**Ian McLaren , Andrew Wales , Mark Breslin & Robert Davies (2011) Evaluation of commonly-used farm disinfectants in wet and dry models of Salmonella farm contamination, Avian Pathology, 40:1, 33-42, DOI: 10.1080/03079457.2010.537303*

*** Efficacy of disinfectants and detergents intended for a pig farm environment where Salmonella is present,*

