

Table 1. Caustic and chlorine contents in detergent-sterilizer products on the Irish market (Teagasc, March, 2011). Product names in order of decreasing caustic content

Product Name	PCS number	% Caustic w/w	*Working solution (ppm)		% Chlorine w/w	*Working solution (ppm)	
			Hot wash	Cold wash		Hot wash	Cold wash
These products are best used in a daily hot wash with option of re-using solution as a cold wash at the next milking							
Cryosan liquid		18.67	1245	1867	3.45	230	345
Hydrosan Liquid	93608	18.67	1245	1867	3.11	207	311
Kilcosan		17.47	1631	1631	4.46	416	416
Unisan Liquid		17.26	1151	1726	2.67	178	267
Parlorsan		17.14	1371	1600	3.68	294	343
Co-op Turbosan	96322	16.71	1337	1485	3.48	278	309
Avalksan		16.54	1286	1470	3.49	271	310
Multisan	93472	16.42	1314	1460	3.43	274	305
Kleensan		16.31	1305	1468	3.31	265	298
Ultrasan		16.06	1428	1428	5.18	460	460
Universan	96324	15.94	1275	1417	3.49	279	310
Agrisan extra		15.81	966	1405	3.64	222	324
Liquid Gold		14.35	995	1196	3.80	263	317
Aquasan		14.03	1247	1247	3.01	268	268
Galvisan Plus		12.84	803	1124	3.45	216	302
Buyrite		12.5	972	1167	2.54	198	237
Mueller xtra strength		11.50	958	958	2.64	220	220
These products should be used with hot water daily and the solution not recycled							
Vanorinse		11.23	351	x	4.69	147	x
Circoaction AF1	96147	10.09	505	x	6.96	348	x
Vanosan		9.99	500	x	3.23	161	x
C-Alka		9.89	495	x	3.12	156	x
Autoklene		9.34	467	x	2.65	133	x
Deosan TC86	94490	9.30	465	x	3.71	185	x
Chlorodex	95654	9.21	461	x	2.84	142	x
DeLaval super		8.95	716	x	2.84	227	x
Hyproclo ED	96263	8.75	486	x	4.49	249	x
Alkasan	95651	7.86	82	x	1.63	393	x
Dairy-Chlor		7.26	227	454	3.48	109	218
Specsan (extra strong)		7.14	446	x	4.15	259	x
Delaval ultra		6.36	318	636	2.55	128	255
Circopower AFM	96148	5.43	190	x	6.13	215	x
Gascosan		4.93	no rate	no rate	4.07	no rate	no rate
CircoPower AF		4.86	171	x	5.72	201	x
Dairycleanse		4.32	269	x	3.04	189	x
Liquid dairygold hot		3.90	293	x	7.57	473	x
Supersan		3.69	233	x	7.53	475	x

Rinsan		3.30	206	x	5.52	345	x
BFS hot wash		2.10	140	x	9.59	639	x
Specsan		1.62	101	x	5.33	333	x
Delex H	94667	0.84	53	53	6.68	418	418
Supersan D		0.29	no rate	no rate	5.41	no rate	no rate

● **PCS number = Pesticide control service number, indicates that the product is registered with DAFF and therefore can be legally placed on the Irish market**

● PCS numbers obtained from DAFF website (www.pcs.agriculture.gov.ie/biocidalproductregisterJanuary2011.pdf).

● * Working solutions are calculated based on manufactures recommended usage rates and chemical content of products

● A minimum of 800 ppm of caustic in the working solution is recommended for hot cleaning where the product is reused cold for the afternoon wash. Higher working solutions are required if a hot wash is not used daily

● Lower usage rates may be considered for products with high caustic % when used hot and the solution is not recycled

● Detergents with a lower caustic working solution (<800ppm) will give satisfactory cleaning when used with hot water and the solution is not recycled.

● Increasing the usage rate of products to achieve higher caustic levels may result in non-acceptable levels of chlorine in the working solution.

● Acceptable chlorine levels in the working solution range between 150 and 320 ppm

● An additional acid descale wash should be carried out at a minimum once weekly with all products

Table 2. Caustic content in liquid detergent products on the Irish market (Teagasc, March, 2011). Product names in order of decreasing caustic content

Product Name	Hot wash		*Working solution (ppm)	Cold wash	
	% Caustic w/w	Usage rate (grams/litre)		Usage rate (grams/litre)	*Working solution (ppm)
Timac CIP	28.08	6.2	1747	8.9	2496
P3-mip CIP	27.72	6.7	1848	10.0	2772
Multisan CF**	25.42	6.7	1695	10.0	2542
Parlosan NC**	24.34	10.0	2434	11.1	2704
Quantum x L	22.33	2.5	558	x	x
Alkadex Forte	20.55	5.0	1028	x	x
Hypral SP	15.88	6.7	1059	x	x
Sanagard	10.48	5.0	524	x	x

● * Working solutions are calculated based on manufactures recommended usage rates and % caustic measured in products

●** The addition of hydrogen peroxide to these products is recommended by manufacturers as part of a good cold/hot wash program

● An additional acid descale wash should be carried out at a minimum once weekly with all products

Table 3: Caustic content in powder detergent products on the Irish market (Teagasc, March, 2011). Products names are listed in alphabetical order

Product Name	PCS number	Usage rate (grams/litre)	*Working solution (ppm)
			Caustic
Alfasan Plus	N/A	5.6	4500
BFS cold wash	N/A	5.0	4700
C6 DeLaval***	94350	3.8	3600
Circodine P***	93464	5.0	2900
Ciopro AP***	96149	3.8	1400
Cold wash Evans	N/A	5.0	4300
Cold wash agrosolve	N/A	5.0	2700
Cryosan Plus	N/A	5.0	4200
Crystal Powder cold cleaner	N/A	2.5	3600
Dairygold cold circulation cleaner	N/A	5.6	5300
Dairy-clean plus	N/A	5.6	3900
Dairy-san**	N/A	3.8	1600
D 90***	94751	2.5	2000
Deosan Farm Cold Cleaner	N/A	5.0	3200
Duosan 50***	95667	3.1	800
Galvisan cold wash	N/A	5.0	4800
Hydrosan Plus	N/A	5.0	3500
Kilco Clearway	N/A	5.0	3700
Koldosan	N/A	5.0	2000
Koldklene	N/A	5.0	3000
Metron powder	N/A	3.8	2700
Muller cold detergent	N/A	5.0	4300
Polarsan Plus	N/A	5.6	4700
Turboclean	N/A	5.6	5000
Unisan Plus	N/A	5.0	5000

N/A = not applicable (as contains no chlorine)

- * Working solutions are calculated based on manufactures recommended usage rates and chemical content of products
- ** Product recommended to be used as hot wash only
- *** Products contain some chlorine
- Working solutions above 2000ppm are recommended for powder cold caustic cleaning products containing no chlorine. Lower working solutions (800ppm) of caustic may be used with products containing chlorine
- Detergents may be recycled on one occasion
- Increasing the usage rate will result in higher caustic working solutions
- Some products contain high levels of sodium carbonate while other products contain high levels of non caustic alkaline detergents which have additional cleaning benefits.
- An additional acid descale wash should be carried out at a minimum once weekly with all products

Table 4: Chlorine content in sterilizer products on the Irish market (Teagasc, March, 2011)

Product names listed in alphabetical order

Product Name	PCS number	% Chlorine w/w	usage rate (mls/litre)	**Working solution (ppm)
Chlinichlor	95653	8.60	2.5	215
Cryosan Hypochlorite		11.73	3.8	443
CO-OP source chloros	96321	8.12	2.5	203
Dairy Hypochlorite	96163	9.92	2.2	220
DairyChlor		6.95	3.8	263
Deosan Red Label	94183	10.07	2.5	252
Galvichlor		9.11	2.5	228
Micro-Chlor	94992	9.33	2.5	233
Red Label	95409	7.80	2.5	195
Spechlor		8.35	2.5	209
Superblend Hypochlorite		8.86	3.9	345
Ultrachlor	94457	10.69	2.5	271

- ^{**} Working solutions are calculated based on manufactures recommended usage rates and % chlorine measured in products
- All sterilizer products contain adequate levels of chlorine
- To be used as recommended by manufacturers **for use once weekly** in conjunction with caustic detergent