

**REGULATIONS GOVERNING ACIDS, BASES AND SALTS
AND THE AMOUNTS THEREOF THAT FOODSTUFFS MAY
CONTAIN**

	as amended by	
Notice	Government Gazette	Date
R.1885	10882	4 September 1987
R.2128	14178	31 July 1992
R.1300	15000	23 July 1993
R.330	15515	25 February 1994

The Minister of National Health and Population Development in terms of section 15 (1) of the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act 54 of 1972), has made the regulations contained in the Schedule hereto.

SCHEDULE

1. Definitions.—In these regulations “the Act” shall mean the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act 54 of 1972), and any expression to which a meaning has been assigned in the Act shall bear such meaning, and, unless inconsistent with the context—

“**acid**” shall mean any substance which is capable, and generally used for the purpose, of increasing the acidity of a foodstuff;

“**annex**” shall mean the Annex to these regulations;

“**base**” shall mean any substance which is capable, and generally used for the purpose of increasing the alkalinity of a foodstuff; and

“**salt (buffer)**” shall mean any substance which is capable, and generally used for the purpose, of altering and controlling the acidity or alkalinity of a foodstuff.

2. Subject—

(a) to the provisions of regulation 3 and 4; and

(b) to the provisions of the regulations made under the Act relating to—

(i) the additives and amounts as well as the tolerances for certain substances in wine, other fermented beverages and spirits, published by Government Notice R. 2870 of 31 December 1981;

- (ii) foodstuffs for infants, young children and children, published by Government Notice R. 1130 of 8 June 1984;
- (iii) preservatives and antioxidants, published by Government Notice R. 965 of 3 June 1977;
- (iv) wheaten and rye products, published by Government Notice R. 1655 of 14 September 1973;
[Sub-para. (iv) added by GNR.1885 of 1987.]
- (v) jam, conserve, marmalade and jelly, published by Government Notice R. 2627 of 12 December 1986,
[Sub-para. (v) added by GNR.1885 of 1987.]

no foodstuff shall contain any added acid, base of salt.

3. A foodstuff listed in Column I of the Annex may—

- (a) contain any of the acids, bases of salts specified opposite thereto in Column II of the Annex in a proportion not exceeding the number of milligrams per kilogram specified opposite thereto in column III of the Annex;
- (b) contain a mixture of the acids, bases and salts referred to in paragraph (a), if compatible, on condition that the sum of the fractions obtained when the amount of each acid, base or salt used is divided by the maximum permissible amount of such acid, base or salt when used alone does not exceed one.

4. Subject to the provisions of regulations 2 and 3, foodstuffs prepared in part from foodstuffs not listed in column I of the Annex and in part from foodstuffs listed in the said column shall not contain a larger quantity of acid, base or salt than is permissible in the latter foodstuffs in terms of these regulations.

5. Where criteria of purity are laid down for an acid, base or salt in the latest version of *Food Chemicals Codex*, such criteria shall apply.

6. These regulations shall come into effect three months after the date of publication thereof.

Annex

[Annex amended by GNR.1885 of 1987, by GNR.2128 of 1992, by GNR.1300 of 1993 and by GNR.330 of 1994.]

I Foodstuff	II Acid, base or salt	III Maximum level mg/kg
1. BAKING POWDER	Ca carbonate Ca lactate Ca, K and Na ortho- and pyrophosphate DL-tartaric acid Glucono delta-lactone K and Na hydrogen carbonate Na aluminium phosphate, acidic Na aluminium sulphate L(+)-tartaric acid and its Na and K salts	*GMP
["Baking Powder" substituted by GNR.1885 of 1987. "DL-tartaric acid" inserted by GNR.2128 of 1992.]		
2. CEREAL PRODUCTS	Glucono-delta-lactone	*GMP
["Canned pasta products" inserted by GNR.330 of 1994.]		
Canned pasta products	Glucono-delta-lactone	*GMP
Instant breakfast cereals, pre-cooked	Ca and Mg carbonate Ca, K and Na orthophosphate Citric acid and its Ca, K and Na salts	*GMP
Meal or flour from which wheaten or rye products are manufactured
["Meal or flour from which wheaten or rye products are manufactured" deleted by GNR.1885 of 1987.]		
Self-raising pre-mixed powdered cake and bread flours	Acetic acid and its Ca, K and Na salts Ca, K and Na and NH ₄ orthophosphate DL-tartaric acid Glucono-delta-lactone K and Na hydrogen carbonate Na-aluminium phosphate, acidic Na-aluminium sulphate NH ₄ hydroxide L(+)-tartaric acid and its Ca, K and Na salts	3 000 *GMP
["DL-tartaric acid" inserted by GNR.2128 of 1992.]		
3. COCOA Cocoa beans, nibs, mass, press cake and dust	Citric acid L(+)-tartaric acid Phosphoric acid	5 000, single or in combination 2 500, expressed as P ₂ O ₅ on the cocoa fraction.

I <i>Foodstuff</i>	II <i>Acid, base or salt</i>	III <i>Maximum level mg/kg</i>
	Ca, K, Mg, Na and NH ₄ carbonates K, Mg, Na and NH ₄ hydroxides K, Na and NH ₄ hydrogen carbonate.....	5 000, singly or in combination with other alkalisng agents, expressed as anhydrous K ₂ CO ₃ on a fat-free basis
	DL-tartaric acid	*GMP
[“DL-tartaric acid” inserted by GNR.2128 of 1992.]		
Cocoa powders	Ca, K, Mg, Na and NH ₄ carbonate..... K, Mg, Na and NH ₄ hydroxide..... K, Na and NH ₄ hydrogen carbonate.....	5 000, singly or in combination with other alkalisng agents, expressed as anhydrous K ₂ CO ₃ on a fat-free cocoa fraction
	Citric acid L(+)-tartaric acid	5 000, singly or in combination on the cocoa fraction
	Phosphoric acid	2 500, expressed as P ₂ O ₅ on the cocoa fraction
4. CONDIMENTS		
Chutney and ketchup	Acetic acid DL-tartaric acid K, Mg and Na carbonate.....	*GMP
[“DL-tartaric acid” inserted by GNR.2128 of 1992.]		
	Ca gluconate Citric acid and its Ca, K and Na salts..... Fumaric acid and its Ca, K and Na salts L(+)-tartaric acid and its Ca, K and Na salts	Sufficient to maintain the pH at a level of 2,8 to 3,5 3 000, expressed as the acid
French dressing, mayonnaise, salad cream, mint jelly, prepared mustards and sandwich spread	Acetic acid Citric acid Lactic acid..... DL-malic acid..... Phosphoric acid	*GMP
[“Phosphoric acid” inserted by GNR.2128 of 1992.]		
Low-oil dressing and no-oil dressing	Acetic acid Citric acid Lactic acid..... DL-malic acid.....	*GMP

I <i>Foodstuff</i>	II <i>Acid, base or salt</i>	III <i>Maximum level mg/kg</i>
Sauces (including dry sauce mixes)	Acetic acid Ca, K and Na polyphosphate..... Citric acid and its Na salts..... DL-tartaric acid Fumaric acid and its Ca, K and Na salts..... Gluconic acid and its Ca, K and Na salts..... K and Na monophosphate Mg and Na carbonate..... L(+)-tartaric acid and its Ca, K and Na salts..... DL-malic acid..... Lactic acid.....	*GMP
[“Sauces (including dry sauce mixes)” substituted by GNR.1885 of 1987. “DL-tartaric acid” inserted by GNR.2128 of 1992.]		
5. CHOCOLATE, SUGAR AND FLOUR CONFECTIONERY		
Chocolate (except where otherwise specified)	Citric acid L(+)-tartaric acid DL-tartaric acid	5 000, singly or in combination *GMP
[“DL-tartaric acid” inserted by GNR.2128 of 1992.]		
Chocolate, composite and flavoured, excluding filling	Phosphoric acid Ca, K, Mg, Na and NH ₄ carbonate..... K, Mg, Na and NH ₄ hydroxide..... K, Na and NH ₄ hydrogen carbonate.....	2 500, expressed as P ₂ O ₅ on the cocoa fraction 5 000, singly or in combination with other alkalisng agents, expressed as anhydrous K ₂ CO ₃ on a fat-free basis
Sugar confectionery, excluding chocolate but including flour confectionery; and excluding filling	Acetic acid and its Ca, K and Na salts Carbonic acid and its Ca, K, Mg and NH ₄ salts Carbonic acid diamide (urea) DL-tartaric acid Fumaric acid and its Ca, K and Na salts..... Gluconic acid and its Ca, K and Na salts..... Lactic acid and its Ca, K and Na salts..... DL-malic acid and its Ca, K and Na salts..... Na hydrogen carbonate..... Glucono delta-lactone..... Na aluminium phosphate, acidic Citric acid and its Ca, K, Na and NH ₄ salts ... L (+)-tartaric acid and its Ca, K and Na salts...	*GMP
[“DL-tartaric acid” inserted by GNR.2128 of 1992.]		

I <i>Foodstuff</i>	II <i>Acid, base or salt</i>	III <i>Maximum level mg/kg</i>
	Ca, K and Na orthophosphate	10 000, expressed as P ₂ O ₅ , carried over from baking powder
	Phosphoric acid	2 500, expressed as P ₂ O ₅ , carried over from use of chocolate
["Sugar confectionery, excluding chocolate but including flour confectionery; and excluding filling" substituted by GNR.1885 of 1987.]		
6. DESSERTS		
Custard	Acetic acid and its Ca, K and Na salts	*GMP
Instant puddings, instant whips, instant trifles, and powdered dessert mixes	Acetic acid and its Ca salts	*GMP
	Adipic acid.....	
	Citric and its Ca, K and Na salts	
	Disodium phosphate.....	
	DL-tartaric acid	
	Lactic acid and its Ca, K and Na salts.....	
	DL-malic acid and its Ca, K and Na salts	
	Na hydrogen carbonate.....	
	Na polyphosphate, tribasic	
	Orthophosphoric acid and its Ca, K and Na salts	
	L(+)-tartaric acid and its Ca, K and Na salts	
	Tetrasodium pyrophosphate	
["Instant puddings, instant whips, instant trifles, and powdered dessert mixes" substituted by GNR.1885 of 1987. "DL-tartaric acid" inserted by GNR.2128 of 1992.]		
Jellies and desserts, cold, set or refrigerated	Adipic acid.....	*GMP
	Carbonic acid diamide (urea)	
	Citric and its K and Na salts	
	DL-tartaric acid	
	Fumaric acid	
	K chloride	
	K hydrogen phosphate, dibasic	
	DL-malic acid and its Ca, K and Na salts	
	Na polyphosphate	
	L(+)-tartaric acid and its Ca, K and Na salts	
	Tetrasodium pyrophosphate	
	Na hydrogen carbonate.....	
["DL-tartaric acid" inserted by GNR2128 of 1992.]		

I Foodstuff	II Acid, base or salt	III Maximum level mg/kg
Jellies, conventional, including table jellies	Adipic acid..... Carbonic acid diamide (urea)..... Citric and its Ca, K and Na salts..... Disodium phosphate..... DL-tartaric acid..... Fumaric acid and its Ca, K and Na salts..... K hydrogen phosphate, dibasic..... DL-malic acid and its Ca, K and Na salts..... Na pyrophosphate..... L(+)-tartaric acid and its Ca, K and Na salts.....	*GMP
["DL-tartaric acid" inserted by GNR.2128 of 1992.]		
Pectin dessert mixes	Adipic acid..... Citric and its K and Na salts..... DL-malic acid and its Ca, K and Na salts..... Fumaric acid..... Lactic acid and its Ca, K and Na salts.....	*GMP
7. FROZEN DESSERTS		
Ice cream, frozen custard, ice milk and sherbet	Acetic acid..... Citric and its Na, K and Ca salts..... DL-lactic acid and its Na, K and Ca salts..... DL-malic acid..... DL-tartaric acid..... Na hydrogen carbonate.....	*GMP
["DL-tartaric acid" inserted by GNR.2128 of 1992.]		
8. FRUIT	Na and K polyphosphate and tripolyphosphate..... Na, K and Ca orthophosphate..... L(+)-tartaric acid and its Na and K salts.....	2 000, singly or in combination, expressed as P ₂ O ₅ 1 000
Apple sauce, cherries, grapes, litchis and peaches, canned; peaches and strawberries, quick frozen	Citric acid..... DL-malic acid.....	*GMP
Apricots, gooseberries, guavas, kiwifruit, quinces, youngberries, canned	Citric acid..... Malic acid..... Fumaric acid.....	*GMP
["Apricots, gooseberries, guavas, kiwifruit, quinces, youngberries, canned" inserted by GNR.1885 of 1987.]		

I <i>Foodstuff</i>	II <i>Acid, base or salt</i>	III <i>Maximum level mg/kg</i>
Granadilla pulp, mangoes, melon and paw-paw, canned	Citric acid DL-lactic acid DL-malic acid	*GMP
Grapefruit, canned	Citric acid	*GMP
Mandarins, canned	Citric acid	*GMP
Oranges, canned	Citric acid	*GMP
Pears, canned	Citric acid DL-malic acid DL-lactic acid DL-tartaric acid L(+)-tartaric acid	*GMP
Pineapple, canned ["DL-tartaric acid" inserted by GNR.2128 of 1992.]		
Strawberries, canned	Citric acid Citric acid Lactic acid DL-malic acid DL-tartaric acid L(+)-tartaric acid	*GMP *GMP
["DL-tartaric acid" inserted by GNR.2128 of 1992.]		
Tropical fruit salad, canned	Citric acid	*GMP
9. FRUIT JUICES/ FRUIT NECTARS		
Apricot, peach and pear nectars	Citric acid DL-malic acid	*GMP
Grape juice and grape juice, concentrated	Ca-hydroxide Citric acid DL-malic acid	*GMP
Labrusca type grape juice, sweetened, concentrated	Citric acid DL-malic acid	*GMP
Non-pulpy blackcurrant, apple, guava, mango, orange and lemon, nectar/juice	Citric acid DL-malic acid	*GMP
Pineapple juice	Citric acid DL-malic acid	*GMP, but not allowed when the juice contains added sugars
Pulpy nectars of small fruits	Citric acid DL-malic acid	*GMP

I <i>Foodstuff</i>	II <i>Acid, base or salt</i>	III <i>Maximum level mg/kg</i>
Fruit juices (except where otherwise specified), excluding concentrated fruit juices	Citric acid DL-malic acid.....	*GMP
10. JAMS, WHOLE-FRUIT PRESERVES, AND JELLIES		
Jams, whole-fruit preserves, marmalade (citrus) and jellies (except where otherwise specified)	Citric acid and its Ca, K and Na salts..... DL-malic acid and its Ca, K and Na salts DL-tartaric acid K and Na carbonate K and Na hydrogen carbonate..... Lactic acid and its Ca, K and Na salts.....	*GMP
	[“DL-tartaric acid” inserted by GNR.2128 of 1992.]	
11. MARGARINE	Fumaric acid and its Ca, K and Na salts L(+)-tartaric acid and its Ca, K and Na salts	3 000, singly or in combination, expressed as P ₂ O ₅
	Citric acid and its K and Na salts DL-tartaric acid Lactic acid and its K and Na salts Na-carbonate..... Na hydrogen carbonate..... Na hydroxide L(+)-tartaric acid and its K and Na salts	*GMP
	[“DL-tartaric acid” inserted by GNR.2128 of 1992.]	
12. MARINE FOODS		
(a) <i>Canned fish and shellfish</i>		
Crab meat and lobster flesh	Citric acid	*GMP
	Diphosphate and disodium dihydrogen (disodium pyrophosphate)..... Phosphoric acid	5 000, singly or in combination, expressed as P ₂ O ₅
Mackerel, jack mackerel (maasbanker) sardines and sardine-type products	Acetic acid..... Citric acid Lactic acid.....	*GMP
Prawns and shrimps	Citric acid Phosphoric acid	*GMP 850 of the final product
Tuna and bonito in water or oil	Diphosphate, tetrasodium (Na pyrophosphate)	5 000, expressed as P ₂ O ₅

I Foodstuff	II Acid, base or salt	III Maximum level mg/kg
Fish (all species except where otherwise specified)	Polyphosphate, sodium or potassium (Na/K hexametaphosphate).....	5 000, expressed as P ₂ O ₅
(b) Fish pastes	Acetic acid.....	*GMP
(c) Quick frozen fillets	Cod, flatfish, haddock and ocean perch	
	Diphosphate, tetrasodium or tetrapotassium (Na/K pyrophosphate).....	
	Monophosphate, monosodium or monopotassium (Na/K orthophosphate).....	
	Polyphosphate, sodium (Na hexametaphosphate).....	5 000 of the final product, expressed as P ₂ O ₅ , singly or in combination
	Triphosphate, pentasodium or pentapotassium or calcium (Na/K/Ca tripolyphosphate).....	
Hake	<i>Water binding agents</i> (drip-loss prevention)	
	Diphosphate, tetrasodium or tetrapotassium (Na/K pyrophosphate).....	
	Monophosphate, monosodium or monopotassium (Na/K orthophosphate).....	5 000 of the final product, expressed as P ₂ O ₅ singly or in combination
	Polyphosphate, sodium (Na hexametaphosphate).....	
	Triphosphate, pentasodium or pentapotassium or calcium (Na/K/Ca tripolyphosphate)	
(d) Quick frozen shellfish	Crabs and lobsters	
	Polyphosphate, sodium (Na hexametaphosphate).....	5 000 of the final product, expressed as P ₂ O ₅
	Triphosphate, pentasodium or pentapotassium or calcium (Na/K/Ca tripolyphosphate).....	
Prawns and shrimps	Citric acid.....	*GMP
	Diphosphate, pentasodium or pentapotassium or calcium (Na/K/Ca tripolyphosphate).....	5 000 of the final product, expressed as P ₂ O ₅ singly or in combination
	Polyphosphate, sodium (Na hexametaphosphate).....	
(e) Fresh fish	Disodium dihydrogen pyrophosphate.....	*GMP
	[“(e) Fresh fish” inserted by GNR.1885 of 1987.]	
(f) Pickled and curried fish	Acetic acid.....	
	Citric acid.....	
	Lactic acid.....	*GMP
	[“(f) Pickled and curried fish” inserted by GNR.1885 of 1987.]	

I <i>Foodstuff</i>	II <i>Acid, base or salt</i>	III <i>Maximum level mg/kg</i>
Evaporated or condensed whole milk, low-fat milk and skimmed milk, sweetened and unsweetened	Carbonic acid and its Ca, K and Na salts Chloride, Ca, K and Na Citric acid and its Ca, K and Na salts Monophosphate, Ca, K and Na Polyphosphate, Ca, K and Na.....	2 000 singly or 3 000 in combination with other stabilisers permitted by regulation, expressed as anhydrous substances
Whole milk powder, low-fat milk powder, skimmed-milk powder and cream powder	Carbonic acid and its Ca, K and Na salts Chloride, Ca, K and Na Citric acid and its Ca, K and Na salts Monophosphate, Ca, K and Na Polyphosphate, Ca, K and Na.....	5 000 singly or in combination, expressed as anhydrous substances
15. NON-DAIRY CREAMERS AND DAIRY BLENDS	K phosphate, dibasic..... Mono- and disodium phosphate Tricalcium phosphate	*GMP
[“Non-dairy creamers and dairy blends” substituted by GNR.1885 of 1987.]		
16. PICKLES		
Atchar	Citric acid Lactic acid..... Malic acid	*GMP
[“Atchar” inserted by GNR.1885 of 1987.]		
Olives	Citric acid Lactic acid.....	15 000
Cocktail onions	Na hydroxide	*GMP
Cucumbers, pickled	Acetic acid	20 000
Mixed pickles	Al-K sulphate.....	*GMP
Beetroot, cabbage, chow-chow, gherkins, horse radish, piccalilli and sauerkraut, canned	Citric acid	15 000, singly or in combination
	DL-malic acid	
	Lactic acid.....	
Beetroot, cabbage, chow-chow, gherkins, horse radish, piccalilli and sauerkraut, canned	Acetic acid	*GMP
Beetroot, cabbage, chow-chow, gherkins, horse radish, piccalilli and sauerkraut, canned	Citric acid	*GMP
Beetroot, cabbage, chow-chow, gherkins, horse radish, piccalilli and sauerkraut, canned	Lactic acid.....	*GMP

I <i>Foodstuff</i>	II <i>Acid, base or salt</i>	III <i>Maximum level mg/kg</i>
17. SOFT DRINKS INCLUDING FRUIT SQUASHES, FRUIT SYRUPS AND POWDERED MIXES	Acetic acid and its Ca, K and Na salts Ca carbonate Citric acid and its Ca, K and Na salts Ca, K and Na phosphate DL-tartaric acid Fumaric acid Lactic acid and its Ca, K and Na salts DL-malic acid and its Ca, K and Na salts L(+)-tartaric acid and its Ca, K and Na salts Na bicarbonate	*GMP
["DL-tartaric acid" inserted by GNR.2128 of 1992.]		
Orthophosphoric acid		600
["Soft drinks including fruit squashes, fruit syrups and powdered mixes" substituted by GNR.1885 of 1987.]		
18. SOUPS, BOUILLONS AND CONSOMMÉS, CANNED OR POWDERED	Acetic acid and its K and Na salts Citric acid and its K and Na salts DL-lactic acid and its K and Na salts DL-tartaric acid Fumaric acid Malic acid	*GMP
["DL-tartaric acid" inserted by GNR.2128 of 1992.]		
L(+)-tartaric acid and its K and Na salts		250
Mono-, di- and trisodiumphosphate or -potassium		1 000 of the final product, expressed as P ₂ O ₅ , singly or in combination
Di- and tetrasodiumpyrophosphate or -potassium pyrophosphate		
["Soups, bouillons and consommés, canned or powdered" substituted by GNR.1885 of 1987.]		
19. SPICES, SPICE MIXES AND SEASONING SALTS	Acetic acid and its Na salt Citric acid and its Na salt Fumaric acid Na hydrogen carbonate	*GMP
20. VEGETABLES All canned vegetables	Glucono-delta-lactone	*GMP
["All canned vegetables" inserted by GNR.330 of 1994.]		
Artichoke hearts, canned	Citric acid	*GMP

I Foodstuff	II Acid, base or salt	III Maximum level mg/kg
Asparagus, canned	Acetic acid Citric acid DL-malic acid DL-tartaric acid L(+)-tartaric acid	*GMP
[“DL-tartaric acid” inserted by GNR.2128 of 1992.]		
Carrots, quick frozen	Ca malate Citric acid Na hydroxide	800, expressed as Ca *GMP *GMP
Cauliflower, quick frozen	Citric acid DL-malic acid	Carried over from processing *GMP, carried over from processing
Corn on the cob, quick frozen	Citric acid DL-malic acid	*GMP, carried over from processing
Corn, whole kernel, quick frozen	Citric acid DL-malic acid	*GMP
Mushrooms, canned	Citric acid	*GMP
Potatoes, canned	Acetic acid Citric acid DL-malic acid Phosphate, Ca monobasic	*GMP
Potatoes, French fried and quick frozen	Citric acid DL-malic acid K and Na hydroxide	*GMP
Tetrasodium and disodium pyrophosphate		
Sweetcorn, canned	Citric acid	*GMP
Tomatoes, canned	Acetic acid Citric acid and its Ca salt DL-lactic acid and its Ca salt DL-malic acid and its Ca salt DL-tartaric acid L(+)-tartaric acid	100, singly or in combination with other sequestrants. Phosphates expressed as anhydrous substances *GMP
[“DL-tartaric acid” inserted by GNR.2128 of 1992.]		

I <i>Foodstuff</i>	II <i>Acid, base or salt</i>	III <i>Maximum level mg/kg</i>
Tomato concentrate, processed	Citric acid	Sufficient to maintain the pH at a level not above 4,3
	DL-lactic acid	
	DL-malic acid	
	L(+)-tartaric acid	
	DL-tartaric acid	
	[“DL-tartaric acid” inserted by GNR.2128 of 1992.]	*GMP
	Na hydrogen carbonate.....	Sufficient to raise the pH to a level not above 4,3
21. MALT BEVERAGES	K-hydrogen carbonate	*GMP
	[“Malt beverages” inserted by GNR.1885 of 1987.]	

* “GMP” shall mean the amount used in accordance with current good manufacturing practice.