Claims

[CLAIM 1]

A colon cleansing solution comprising:

(i) 150 to 250 g per litre PEG having an average molecular weight of 2500 to 4500 Da;

(ii) 17 to 19 g per litre of one or more alkali metal sulphates, alkaline earth metal sulphates or a mixture thereof;

(iii) optionally one or more electrolytes;

(iv) optionally one or more flavouring agents; and

(v) optionally one or more sweeteners.

[CLAIM 2]

A colon cleansing solution as claimed in Claim 1 wherein the solution is administered with a volume of 400 to 800 ml.

[CLAIM 3]

A colon cleansing solution as claimed in Claim 1 wherein the solution is administered with a volume of 400 to 600 ml.

[CLAIM 4]

A colon cleansing solution as claimed in any one of the preceding claims further comprising 3.0 to 5.0 g per litre sodium chloride and 1.5 to 2.5 g per litre potassium chloride.

[CLAIM 5]

A colon cleansing solution as claimed in any one of the preceding claims further comprising a souring agent, for example citric acid.

[CLAIM 6]

A colon cleansing solution as claimed in any one of the preceding claims wherein the sweetener is sucralose.

[CLAIM 7]

A colon cleansing solution as claimed in any one of the preceding claims in which the flavouring agent is fruit punch flavour.

[CLAIM 8]

A composition optionally presented in two or more parts for the preparation of a colon cleansing solution, as claimed in claim 1, comprising:

(i) 87.5 to 110 g PEG having an average molecular weight of 2500 to 4500 Da.
(ii) 7.5 to 10 g of one or more alkali metal sulphates, alkaline earth metal sulphates or a mixture thereof
(iii) 1.5 to 2.5g sodium chloride and 0.75 to 1.25g potassium chloride;
(iv) optionally one or more flavouring agents; and
(v) optionally one or more sweeteners.

[CLAIM 9]

A composition, as claimed in claim 8, comprising

(i) 100 g PEG having an average molecular weight of 3000 to 4000 Da.

(ii) 9.0 g sodium sulphate

(iii) 2.0g sodium chloride and 1.0g potassium chloride;

(iv) optionally one or more flavouring agents; and

(v) optionally one or more sweeteners.

[CLAIM 10]

A kit comprising:

- a first colon cleansing solution, and

- a second colon cleansing solution,

wherein the first colon cleansing solution is as claimed in any one of claims 1 to 9 and the second colon cleansing solution comprises

a) 300 to 800 mmol per litre ascorbate anion provided by a mixture of:

(i) ascorbic acid and

(ii) one or more salts of ascorbic acid

the components (i) and (ii) being present in a molar ratio of from 1:4.5 to 1:7.0; and

b) 10 to 200 g per litre polyethylene glycol.

[CLAIM 11]

A kit as claimed in claim 10 wherein the second cleansing solution comprises one or more of the following:

(a) the one or more salts of ascorbic acid are selected from sodium ascorbate, potassium ascorbate, magnesium ascorbate and calcium ascorbate, or a mixture thereof;
(b) the ascorbate anion in a concentration of: 300-700mmol per litre, for example 350-650mmol per litre, for example 450-600 mmol per litre;
(c) the molar ratio of the components (i) and (ii) is from 1:4.75 to 1:6.75; more preferably from 1:5.0 to 1:6.0; for example from 1:5.40 to 1:5.80; for example 15:85;
(d) the solution comprises 60 to 140g/litre of ascorbate component, for example 80 to 130g/litre, for example 80 to 120g/litre, for example 100 to 120g/litre; and/or
(e) 12 to 20 g/litre of ascorbic acid and 80 to 120 g/litre of sodium ascorbate.

[CLAIM 12]

A kit as claimed in any one of claims 10 to 11 wherein the second cleansing solution comprises one or more of the following:

(a) the polyethylene glycol has an average molecular weight of 2000 to 8000, for example 2500 to 4500 Da, for example 2680 to 4020 Da, for example 3000 to 4000 Da;

(b) 20 to 160g per litre of PEG, for example 40 to 120 g per litre, for example 60 to 100 g per litre, for example 80 g per litre;

(c) sodium chloride at a concentration of 3 to 8 g per litre, for example 4 to 7g per litre; for example 5.6g per litre or 6.4g per litre;

(d) potassium chloride at a concentration of 1 to 10 g per litre, for example a concentration of 1 to 7 g per litre, for example 1.5 to 5g per litre, for example 1.5 to 3g per litre, for example 2.0 to 2.8 g per litre; for example 2.4g per litre or 2.6g per litre; and/or

(e) sodium sulphate, potassium sulphate or magnesium sulphate, at a concentration of 2 to 20 g per litre, for example 5 to 15 g per litre, for example 8 to 15 g per litre, for example 10 to 14 g per litre, for example 12 g per litre.

[CLAIM 13]

A kit as claimed in any one of claims 10 to 12 wherein the second cleansing solution comprises one or more of the following:

(a) essentially free from alkali metal sulphates and alkaline earth metal sulphates;

(b) a flavouring agent;

(c) a sweetener;

(d) aspartame and orange flavouring; and/or

(e) aspartame at 0.5 to 4g per litre, for example 2.5 to 4.0 g per litre, for example 3.0g per litre, for example 3.86g per litre; and orange flavouring at 0.2 to 1.8g per litre.

[CLAIM 14]

A kit as claimed in any one of claims 10 to 13 wherein the second cleansing solution comprises:

a) 300 to 800 mmol per litre ascorbate anion provided by a mixture of

(i) ascorbic acid and

(ii) one or more salts of ascorbic acid

the components (i) and (ii) being present in a molar ratio of from 1:4.5 to 1:7.0;

b) 10 to 200 g per litre PEG having an average molecular weight of 3000 to 4000 Da;

c) sodium chloride and potassium chloride;

e) one or more flavouring agents; and

f) one or more sweeteners

[CLAIM 15]

A kit as claimed in any one of claims 10 to 14 wherein some of all of the components of the second cleansing solution, other than the ascorbate component and the PEG, are provided separately from the solution, for example in a tablet or capsule.

[CLAIM 16]

A kit comprising compositions for admixture with water, wherein the compositions are for making the first and second solutions set out in any one of claim 1 to 15.

[CLAIM 17]

A kit comprising compositions for admixture with water, as claimed in claim 16, wherein the kit comprises:

A) a first component, being a composition optionally presented in two or more parts for the preparation of a first colon cleansing solution comprising :
   (i) 100 g PEG having an average molecular weight of 3000 to 4000 Da.
   (ii) 9.0 g sodium sulphate
   (iii) 2.0g sodium chloride and 1.0g potassium chloride;
   (iv) optionally one or more flavouring agents; and
   (v) optionally one or more sweeteners,

and

B) a second component for the preparation of a second colon cleansing solution, comprising
   a)
   (i) 7.54g ascorbic acid and
   (ii) 48.11g sodium ascorbate
   b) 40g PEG having an average molecular weight of 3000 to 4000 Da;
   c) 3.20g sodium chloride and 1.20g potassium chloride;
   e) one or more flavouring agents; and
   f) one or more sweeteners;

whereby component a) is packaged in a first compartment and components b), c) e) and f) are packaged in a second compartment.

[CLAIM 18]

A kit, as claimed in any one of claims 10 to 17 for use in a method of cleansing the colon comprising:

- the subject taking an effective amount of a first colon cleansing solution as described in any one of claims 1 to 7; and then
- the subject taking an effective amount of a second colon cleansing solution as defined in any one of claims 10 to 17.

[CLAIM 19]

A colon cleansing solution as claimed in any one of claims 1 to 9 for use in a method of cleansing the colon of a subject.

[CLAIM 20]

A method for improving the palatability of a sulphate-containing colon cleansing solution as claimed in claim 1 or claim 2 comprising including in the solution 0.1 to 3.0g per litre sucralose and 0.1 to 4.0g per litre of souring agent, for example citric acid.

[CLAIM 21]

A method as claimed in claim 20 where the sucralose is included at a level of 0.3 to 2.0 g per litre, for example 0.5 to 2.0g per litre, for example 0.5 to 1.3g per litre for example 0.63g, 0.80g, or 1.0g per litre, for example, included at a level of 1.58g per litre.

[CLAIM 22]

A method as claimed in claim 20 or claim 21 wherein the souring agent is selected from citric acid, malic acid, acetic acid, tartaric acid, gluconodeltalactone, phosphoric acid, succinic acid, phytic acid, lactic acid or salts thereof.