

CLAIMS:

1. A pharmaceutical composition suitable for oral administration comprising:
 - (a) a solid core comprising sodium meta-arsenite or potassium meta-arsenite, and the following pharmaceutically acceptable excipients:
 - 5 (i) a filler or diluent in a range of from about 5 to 95% w/w,
 - (ii) a disintegrant in a range of from about 10 to 90% w/w,
 - (iii) a glidant in a range of from about 0.1 to 5% w/w,
 - (iv) a lubricant in a range of from about 0.1 to 5% w/w, and
 - (v) optionally a binder in a range of from 0 to about 30% w/w;
 - 10 and
 - (b) an enteric coating comprising an enteric polymer;wherein the pharmaceutically acceptable excipients are selected such that oxidation of meta-arsenite to meta-arsenate is minimised,
wherein the weight percentage of the enteric coating is from about 6% w/w to about
15 20% w/w with respect to the total weight of the pharmaceutical composition, and
wherein the coating thickness is from about 6.5% to about 15% of the thickness of the pharmaceutical composition.
2. The pharmaceutical composition according to claim 1, wherein the amount of sodium meta-arsenite or potassium meta-arsenite in the solid core is about 0.1 to 5.0% w/w of
20 the solid core.
3. The pharmaceutical composition according to claim 1 or 2, wherein the solid core comprises sodium meta-arsenite.
4. The pharmaceutical composition according to any one of claims 1 to 3, wherein
25 the filler or diluent is present in the solid core of the pharmaceutical composition in an amount of from about 10 to 90% w/w of the solid core.
5. The pharmaceutical composition according to any one of claims 1 to 4, wherein
the filler or diluent is selected from dibasic calcium phosphate anhydrous, partially
pregelatinised starch, silicified microcrystalline cellulose, microcrystalline cellulose, calcium
sulphate dihydrate, lactose, calcium hydrogen phosphate, calcium carbonate, sodium
30 carbonate, calcium phosphate, sodium phosphate, or a mixture thereof.

6. The pharmaceutical composition according to claim 5, wherein the filler or diluent is dibasic calcium phosphate anhydrous, partially pregelatinised starch, or a mixture thereof.

5 7. The pharmaceutical composition according to any one of claims 1 to 6, wherein the disintegrant is present in the solid core of the pharmaceutical composition in an amount of from about 10 to 50% w/w of the solid core.

8. The pharmaceutical composition according to any one of claims 1 to 7, wherein the disintegrant is selected from L-hydroxypropyl cellulose, partially pregelatinised starch, crospovidone, potato starch, corn starch, sodium starch glycolate, and alginate acid.

10 9. The pharmaceutical composition according to claim 8, wherein the disintegrant is L-hydroxypropyl cellulose, partially pregelatinised starch, sodium starch glycolate, or a mixture of two or more thereof.

10. The pharmaceutical composition according to any one of claims 1 to 9, wherein the glidant is present in the solid core of the pharmaceutical composition in an amount of from about 0.3 to 4.0% w/w of the solid core.

11. The pharmaceutical composition according to any one of claims 1 to 10, wherein the glidant is selected from colloidal silicon dioxide and talc.

12. The pharmaceutical composition according to claim 11, wherein the glidant is colloidal silicon dioxide.

20 13. The pharmaceutical composition according to any one of claims 1 to 12, wherein the lubricant is present in the solid core of the pharmaceutical composition in an amount of from about 0.3 to 4.0% w/w of the solid core.

25 14. The pharmaceutical composition according to any one of claims 1 to 13, wherein the lubricant is selected from sodium stearyl fumarate, magnesium stearate, stearic acid, talc, and silica.

15. The pharmaceutical composition according to claim 14, wherein the lubricant is sodium stearyl fumarate.

30 16. The pharmaceutical composition according to any one of claims 1 to 15, further comprising a binder in an amount of from about 1 to 30% w/w of the solid core, wherein the binder is selected from silicified microcrystalline cellulose, microcrystalline cellulose, partially pregelatinised starch, L-hydroxypropyl cellulose (low substituted hydroxypropylcellulose),

hydroxypropyl cellulose, copovidone (polyvinylpyrrolidone), pregelatinised maize starch, hydroxypropylmethylcellulose, starch, acacia, corn starch, and gelatin.

17. The pharmaceutical composition according to claim 16, wherein the binder is L-hydroxypropyl cellulose (low substituted hydroxypropylcellulose), a mixture of
5 L-hydroxypropyl cellulose (low substituted hydroxypropylcellulose) and hydroxypropyl cellulose, or partially pregelatinised starch.

18. The pharmaceutical composition according to any one of claims 1 to 17, wherein the enteric coating provides a weight gain of about 7 to 17% w/w of the solid core.

19. The pharmaceutical composition according to any one of claims 1 to 18,
10 wherein the enteric coating polymer is selected from copolymers of acrylic acids and their esters or methacrylic acids or their esters, polysorbates, cellulose acetate phthalate polymers, hydroxypropyl methylcellulose phthalate polymers, hydroxypropyl methylcellulose acetate succinate, polyvinyl acetate phthalate, cellulose acetate trimellitate, carboxymethylethylcellulose, and shellac.

20. The pharmaceutical composition according to claim 19, wherein the enteric coating polymer is a copolymer of methacrylic acid and ethyl acrylate (1:1).

21. The pharmaceutical composition according to any one of claims 1 to 20, wherein the solid core comprises sodium meta-arsenite, dibasic calcium phosphate anhydrous, L-hydroxypropyl cellulose, hydroxypropyl cellulose, colloidal silicon dioxide, and sodium stearyl
20 fumarate.

22. The pharmaceutical composition according to any one of claims 1 to 20, wherein the solid core comprises sodium meta-arsenite, dibasic calcium phosphate anhydrous powder, partially pregelatinised starch, dibasic calcium phosphate anhydrous, sodium starch glycolate, colloidal silicon dioxide, and sodium stearyl fumarate.

23. The pharmaceutical composition according to any one of claims 1 to 20, wherein the solid core comprises sodium meta-arsenite, dibasic calcium phosphate anhydrous powder, dibasic calcium phosphate anhydrous, L-hydroxypropyl cellulose, sodium starch glycolate, colloidal silicon dioxide, and sodium stearyl fumarate.

24. The pharmaceutical composition according to any one of claims 1 to 20,
30 wherein the solid core comprises sodium meta-arsenite, dibasic calcium phosphate anhydrous, partially pregelatinised starch, sodium starch glycolate, colloidal silicon dioxide, and sodium stearyl fumarate.

25. The pharmaceutical composition according to any one of claims 1 to 20, wherein the solid core comprises sodium meta-arsenite, dibasic calcium phosphate anhydrous, silicified microcrystalline cellulose, sodium starch glycolate, colloidal silicon dioxide, and sodium stearyl fumarate.

5 26. The pharmaceutical composition according to any one of claims 1 to 20, wherein the pharmaceutical composition is an enteric coated tablet comprising 1.67% w/w sodium meta-arsenite of the solid core, and having a solid core diameter of about 6.5 mm, a solid core mass of 150 mg, and an enteric coating which has added about 12% w/w of the solid core.

10 27. A pharmaceutical composition according to any one of claims 1 to 26 for use in the treatment of a disease or condition, wherein the disease or condition is selected from solid malignancy, bone metastasis, metastatic neoplastic disease, primary or metastatic lung tumour, urogenital cancers, leukemia, pain, blood cancers, metastatic cancers, cancer pain, chronic pain, inflammation, autoimmune disorders, immunological disorders, diabetic
15 retinopathy, diabetic vasculopathy, diabetic neuralgia, symptoms associated with insulinitis, and ulcerative colitis.

28. A method of manufacturing the pharmaceutical composition according to any one of claims 1 to 26, the method comprising the following steps:

20 (a) blending an active pharmaceutical ingredient (API) selected from sodium meta-arsenite and potassium meta-arsenite with the following pharmaceutically acceptable excipients to form a powder blend:

(i) a filler or diluent in a range of from about 5 to 95% w/w,

(ii) a disintegrant in a range of from about 10 to 90% w/w,

(iii) a glidant in a range of from about 0.1 to 5% w/w,

25 (iv) a lubricant in a range of from about 0.1 to 5% w/w, and

(v) optionally a binder in a range of from 0 to about 30% w/w;

(b) compressing the powder blend formed in step (a) to form a solid core;

and

(c) coating the solid core with an enteric coating comprising an enteric polymer;

30 wherein the pharmaceutically acceptable excipients are selected such that oxidation of meta-arsenite to meta-arsenate is minimised,

wherein the weight percentage of the enteric coating is from about 6% w/w to about 20% w/w with respect to the total weight of the pharmaceutical composition, and

wherein the coating thickness is from about 6.5% to about 15% of the thickness of the pharmaceutical composition.

- 5 29. A method according to claim 28, wherein step (a) comprises two steps:
- (i) blending the API with a portion of the filler to form an API premix; and
 - (ii) blending the glidant, the disintegrant, the lubricant, and optionally the binder with the API premix.

30. A method according to claim 28, wherein step (a) comprises three steps:
- 10 (i) blending the API with a portion of the filler to form an API premix;
- (ii) blending the glidant, the disintegrant, and optionally the binder with the API premix; and then
- (iii) adding the lubricant (which has optionally been mixed with a portion of the mixture from step (ii)), and then blending.

- 15 31. A method according to any one of claims 28 to 30, wherein step (a) and/or step (b) do not involve the addition of water or solvent.

32. A method for the treatment of a disease or condition in a subject, comprising orally administering to the subject a pharmaceutical composition according to any one of claims 1 to 26, wherein the disease or condition is selected from solid malignancy, bone
- 20 metastasis, metastatic neoplastic disease, primary or metastatic lung tumour, urogenital cancers, leukemia, pain, blood cancers, metastatic cancers, cancer pain, chronic pain, inflammation, autoimmune disorders, immunological disorders, diabetic retinopathy, diabetic vasculopathy, diabetic neuralgia, symptoms associated with insulinitis, and ulcerative colitis.

33. Use of a pharmaceutical composition according to any one of claims 1 to 26 in
- 25 the manufacture of an oral medicament for the treatment of a disease or condition, wherein the disease or condition is selected from solid malignancy, bone metastasis, metastatic neoplastic disease, primary or metastatic lung tumour, urogenital cancers, leukemia, pain, blood cancers, metastatic cancers, cancer pain, chronic pain, inflammation, autoimmune disorders, immunological disorders, diabetic retinopathy, diabetic vasculopathy, diabetic neuralgia,
- 30 symptoms associated with insulinitis, and ulcerative colitis.