

- methyl ether diiodide sesquihydrate, m.p. 115°-117°.
39. 3-Ethoxycarbonylpyridinium-1-methyl 2-hydroxyiminomethylpyridinium-1-methyl ether diiodide, m.p. 151°-153°.
  40. 4-Ethoxycarbonylpyridinium-1-methyl 2-hydroxyiminomethylpyridinium-1-methyl ether diiodide.
  41. 3-n-Propoxycarbonylpyridinium-1-methyl 2-hydroxyiminomethylpyridinium-1-methyl ether diiodide, m.p. 129°-131°.
  42. 4-n-Propoxycarbonylpyridinium-1-methyl 2-hydroxyiminomethylpyridinium-1-methyl ether diiodide.
  43. 3-Isopropoxycarbonylpyridinium-1-methyl 2-hydroxyiminomethylpyridinium-1-methyl ether diiodide, m.p. 147°-149°.
  44. 4-Isopropoxycarbonylpyridinium-1-methyl 2-hydroxyiminomethylpyridinium-1-methyl ether diiodide.
  45. 3-n-Butoxycarbonylpyridinium-1-methyl 2-hydroxyiminomethylpyridinium-1-methyl ether diiodide, m.p. 127°-129°.
  46. 4-n-Butoxycarbonylpyridinium-1-methyl 2-hydroxyiminomethylpyridinium-1-methyl ether diiodide.
  47. 3-Isobutoxycarbonylpyridinium-1-methyl 2-hydroxyiminomethylpyridinium-1-methyl ether diiodide.
  48. 4-Isobutoxycarbonylpyridinium-1-methyl 2-hydroxyiminomethylpyridinium-1-methyl ether diiodide.
  49. 3-sec.-Butoxycarbonylpyridinium-1-methyl 2-hydroxyiminomethylpyridinium-1-methyl ether diiodide.
  50. 4-sec.-Butoxycarbonylpyridinium-1-methyl 2-hydroxyiminomethylpyridinium-1-methyl ether diiodide.
  51. 3-tert.-Butoxycarbonylpyridinium-1-methyl 2-hydroxyiminomethylpyridinium-1-methyl ether diiodide, m.p. 132°-134°.
  52. 4-tert.-Butoxycarbonylpyridinium-1-methyl 2-hydroxyiminomethylpyridinium-1-methyl ether diiodide.
  53. 3-Pinacolyloxycarbonylpyridinium-1-methyl 2-hydroxyiminomethylpyridinium-1-methyl ether diiodide, m.p. 152°-154°.
  54. 3-Cyclohexyloxycarbonylpyridinium-1-methyl 2-hydroxyiminomethylpyridinium-1-methyl ether diiodide, m.p. 142°-144°.
  55. 3-Phenoxycarbonylpyridinium-1-methyl 2-hydroxyiminomethylpyridinium-1-methyl ether diiodide, m.p. 143°-145°.
  56. 3-(2-Naphthoxycarbonyl)pyridinium-1-methyl 2-hydroxyiminomethylpyridinium-1-methyl ether diiodide, m.p. 117°-119°.
  57. 3-Benzoyloxycarbonylpyridinium-1-methyl 2-hydroxyiminomethylpyridinium-1-methyl ether diiodide, m.p. 145°-147°.

## EXAMPLE 58

6 g. of 3-benzoylpyridinium-1-methyl 2-hydroxyiminomethylpyridinium-1-methyl ether diiodide are dissolved in 600 ml. of hot water. 9 g. of silver chloride are added and the mixture is stirred for 2 hours at 60°.

The mixture is filtered while hot and the filtrate is evaporated. 3-Benzoylpyridinium-1-methyl 2-hydroxyiminomethylpyridinium-1-methyl ether dichloride is obtained from the residue by treatment with ethanol, in

the form of the monoethanolate hemihydrate, m.p. from 78° (with decomposition).

The dichlorides corresponding to the diiodides of Example 1 are obtained analogously, for example, 3-N-tert.-butylcarbonylpyridinium-1-methyl 2-hydroxyiminomethylpyridinium-1-methyl ether dichloride monohydrate, m.p. 116°-118°.

The corresponding dibromides are obtained analogously using silver bromide, e.g., 3-benzoylpyridinium-1-methyl 2-hydroxyiminomethylpyridinium-1-methyl ether dibromide, m.p. 116°-118°.

## EXAMPLES 59 AND 60

As in Example 1, there are obtained from 3-isobutyroylpyridine and 3-p-chlorobenzoylpyridine, respectively:

59. 3-Isobutyroylpyridinium-1-methyl 2-hydroxyiminomethylpyridinium-1-methyl ether diiodide, m.p. 142°-144°.

60. 3-p-Chlorobenzoylpyridinium-1-methyl 2-hydroxyiminomethylpyridinium-1-methyl ether diiodide, m.p. 152°-154°.

The example which follows relates to a pharmaceutical formulation which contains a compound of Formula I:

## EXAMPLE A: AMPOULES

A solution of 1 kg. of 3-benzoylpyridinium-1-methyl 2-hydroxyiminomethylpyridinium-1-methyl ether dichloride in 10 l. of water is made up and is filtered under sterile conditions and charged into ampoules in such a way that each ampoule contains 1,000 mg. of active compound.

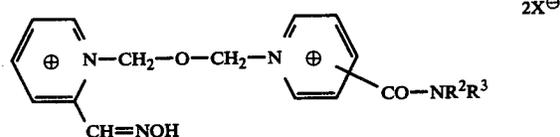
Ampoules which contain one or more of the remaining active compounds of Formula I can be obtained analogously.

The preceding examples can be repeated with similar success by substituting the generically or specifically described reactants and/or operating conditions of this invention for those used in the preceding examples.

From the foregoing description, one skilled in the art can easily ascertain the essential characteristics of this invention and, without departing from the spirit and scope thereof, can make various changes and modifications of the invention to adapt it to various usages and conditions.

What is claimed is:

1. A bis-quaternary pyridinium-2-aldoxime salt of the formula



wherein R<sup>2</sup> is H, cyclohexyl, Ar, aralkyl of 7-13 carbon atoms; R<sup>3</sup> is alkyl of 2-6 carbon atoms, cyclohexyl, Ar or aralkyl of 7-13 carbon atoms; Ar is phenyl, naphthyl or phenyl substituted by up to 5 of alkyl of 1-4 carbon atoms, methoxy or Cl; and X is Cl, Br or I.

2. A compound of claim 1 wherein R<sup>2</sup> is H and R<sup>3</sup> is tert.butyl, cyclohexyl, phenyl, ethyl, p-tert.-butylphenyl, p-tert.-butylbenzyl, 3,4-dichlorophenyl or benzyl.

3. A bis-quaternary pyridinium-2-aldoxime salt of the formula