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of reacting either a mixture of the granules and the mercury with nitric acid to form a nitrate solution, or reacting the silver granules and mercury separately with nitric acid each to form separate solutions, which two solutions are subsequently mixed to form a combined nitrate solution, diluting the nitrate solution by adding water, and introducing metallic copper of high purity which results in a precipitate of a silver mercury composition, which is filtered and washed several times with warm water to remove traces of acid and is then dried to result in the silver-mercury compound,

and combining said mixture with mercury to form a dental amalgam that is devoid of harmful free mercury.

2. A process as claimed in claim 1, characterized in that the silver and tin are mixed in the range of percentage ratios between 60%:40% and 80%:20% by weight respectively to form the silver and tin alloy.

3. A process as claimed in claim 2 characterized in that the silver and tin are mixed in the ratio of 72%:28% by weight respectively.

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4. A process as claimed in claim 3 characterized in that the weights of silver and mercury are in the ratio of 1:1.9 by weight before they are reacted with the nitric acid.

5. A process as claimed in claim 1 characterized in that the composition of treated silver and the composition of silver-mercury are mixed in the range of percentage ratios between 80%:20% to 50%:50% by weight.

6. A process as claimed in claim 5, characterized in that the treated silver composition and the silver-mercury composition are mixed in the percentage ratio of 55%:45% by weight.

7. A process as claimed in claim 1 characterized in that the mixture of treated silver and silver-mercury compositions is mixed with mercury in the range of ratios between 1:1.18 to 1:1.4 by weight, to form the dental amalgam.

8. A process as claimed in claim 7, characterized in that the mixture of the treated silver composition and silver-mercury composition is mixed with mercury in the ratio of 1:1.18 by weight respectively, to form the dental amalgam.

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