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ABSTRACT OF THE DISCLOSURE

A process for producing refined hydrogen iodide by contacting crude hydrogen iodide with a zeolite is disclosed. Crude hydrogen iodide is obtained by reducing iodine with a hydrogenated naphthalene, wherein all of iodine is dissolved in advance in a part of the hydrogenated naphthalene to prepare an iodine solution, and the reaction is carried out while adding continuously or intermittently the above solution to the balance of the hydrogenated naphthalene; and the same operation may be repeated in succession using unreacted hydrogenated naphthalene and fresh iodide. The zeolite is contacted in advance with crude hydrogen iodide, the amount of which is at least 1/3 (weight ratio) relative to the amount of the zeolite, to convert impurities of sulfur components contained in the zeolite to hydrogen sulfide, thereby removing the sulfur components. The kind of the zeolite is an A type zeolite (an average pore diameter: 3 angstrom, 4 angstrom or 5 angstrom) or a mordenite type zeolite. Further, an activated carbon may be combined with the zeolite at the rear stage thereof.

Crude hydrogen iodide is produced at good yield and refined to refined hydrogen iodide having a high purity (organic components: 0.2 ppm by volume or less, water: 0.1 ppm by volume or less).

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