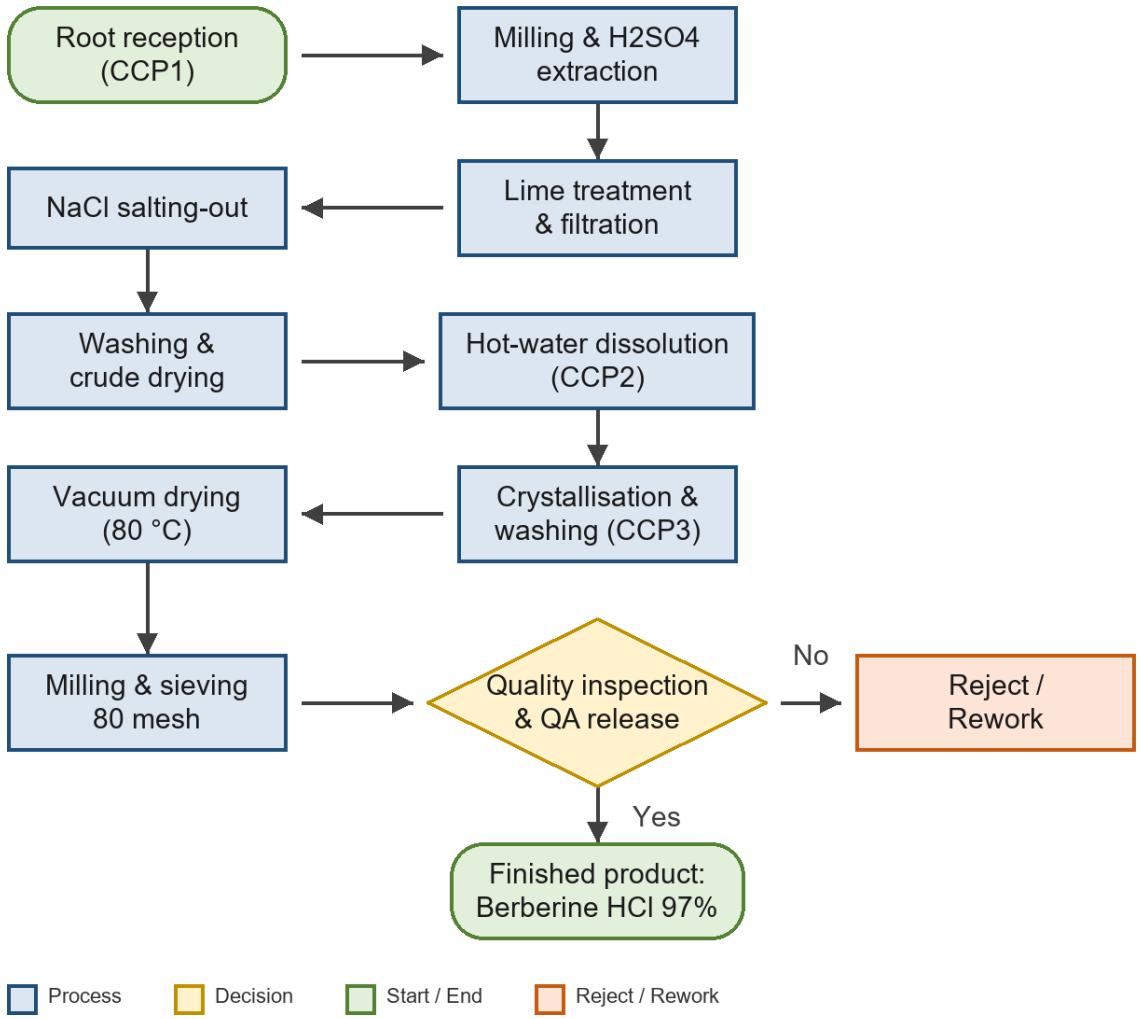
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PROCESS FLOW CHART

Berberine HCl 97%

Berberine HCl 97% is isolated from the rhizome of *Berberis vulgaris*. The milled rhizome is extracted with dilute sulphuric acid, which dissolves the quaternary alkaloid as its sulphate. Lime slurry is added to pH 8.5-9 to precipitate sulphate and resinous matter; the filtrate is salted out with 5-10% sodium chloride. The crude salt is washed, dried at 80 °C, redissolved in hot water and filtered (CCP2), then acidified to pH 1-2 and crystallised on cooling (CCP3). The crystals are washed with cold water, vacuum-dried at 80 °C, milled and sieved through 80 mesh, giving a yellow crystalline powder of not less than 97.0% berberine hydrochloride on the dried basis by HPLC.



The process is operated under a HACCP-based food-safety plan and GMP; critical control points include raw-material acceptance (CCP1), the in-process checks marked on the chart, and the final quality inspection and QA release. Off-spec material is rejected or reworked.

Prepared by: Mia Yu Approved by: Charlie Wang Date: Nov. 18, 2026