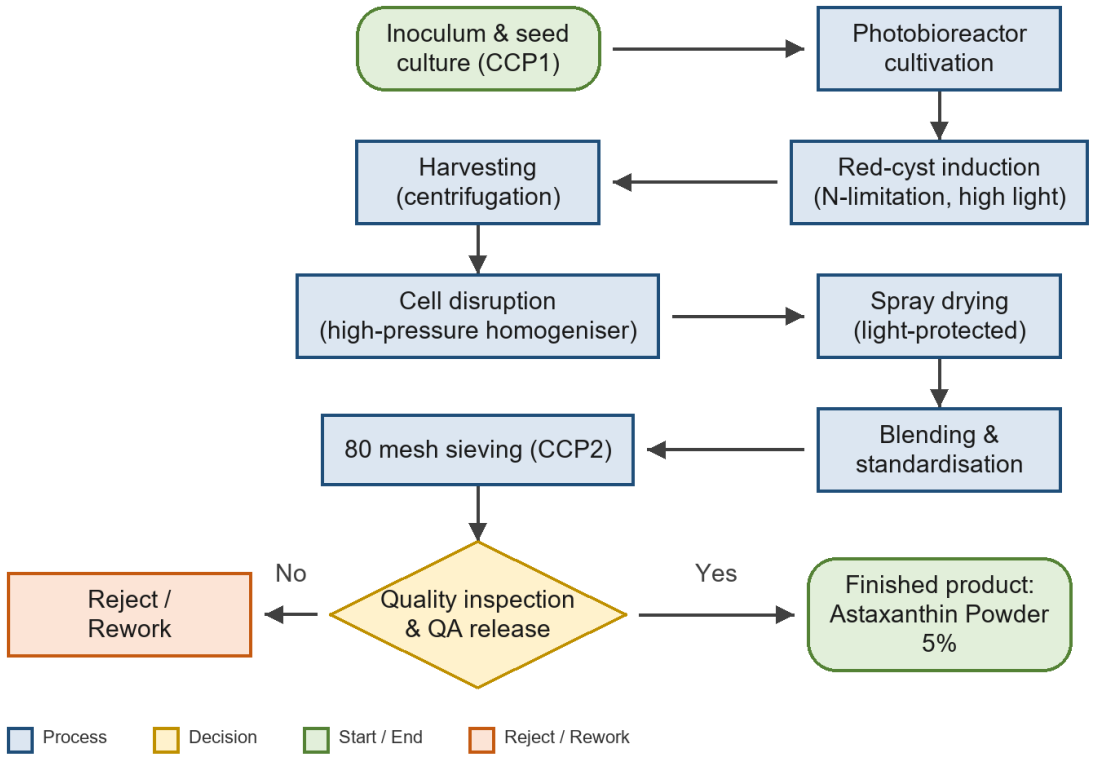
Chengdu PNP Biotech Co., Ltd.

No. 13, South Section 1, Second Ring Road
Suite 709, Wuhou District, Chengdu
Sichuan 610041, P.R. China
info@pnpbiotech.com
www.pnpbiotech.com

PROCESS FLOW CHART

Astaxanthin Powder 5%

Astaxanthin Powder 5% is produced from the green alga *Haematococcus pluvialis*. Seed culture is grown photoautotrophically in closed photobioreactors and then shifted to nitrogen limitation under high light, which turns the cells into red cysts that accumulate astaxanthin. The cysts are harvested by centrifugation, disrupted in a high-pressure homogeniser so that the pigment is bioavailable, and spray-dried under light-protected conditions. The dried biomass is blended to the declared 5.0% astaxanthin content with biomass of the same origin, sieved through 80 mesh (CCP2) before packing, giving a dark-red powder of not less than 5.0% astaxanthin 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. 02, 2026