



Manufacturing flow chart

(chondroitin sulfate shark)

health shark cartilage $\xrightarrow[\text{NaOH NaCl 6~8h}]{\text{[extract]}}$ extractive liquid $\xrightarrow[\text{45}^\circ\text{C~50}^\circ\text{C PH8.5~9}]{\text{[enzyme method] HCl protease}}$

filter liquid $\xrightarrow[\text{alcohol 55~60}^\circ \text{ 6~8h}]{\text{[precipitation once]}}$ precipitate once $\xrightarrow[\text{NaCl 70}^\circ]{\text{solution filter}}$

filter liquid(clean) $\xrightarrow[\text{H}_2\text{O}_2 \text{ 8~12 PH 10~11}]{\text{[oxygenate]}}$ filter liquid $\xrightarrow{\text{[refined filter]}}$

filter liquid $\xrightarrow[\text{alcohol 70}^\circ \text{ PH 6.5~7.5}]{\text{[precipitation twice]}}$ precipitate twice $\xrightarrow{\text{[dehydrate]}}$

semi finished product(wet) $\xrightarrow{\text{[drying]}}$ semi finished product(dry basis)

aseptic packing

$\xrightarrow{\text{Grinding}}$ Chondroitin sulfate shark

Grinding