

Protease DH

Cat. No. PDHG-001

Lot. No. (See product label)

Introduction

Description

Protease DH is a high-performance specialized enzyme preparation for leather dehairing. It rapidly loosens hair follicles under mild reaction conditions, and enzymatic dehairing reduces environmental pollution compared with conventional chemical dehairing methods.

Applications

Leather dehairing Animal hide processing

Product Information

Appearance

Milky white to light yellow solid powder

Form

Solid powder

pH Stability

Effective pH range: 6.0-12.0

Optimum pH

6.0-8.0

Optimum temperature

30-40°C; effective temperature range: 20-60°C

Specificity

Acts on hair-root and keratin-containing structures during animal-hide dehairing.

Function

Promotes rapid loosening of hair roots and enzymatic dehairing of animal hides.

Substrates

Animal hides; keratin in the stratum corneum

Quality

Fineness (passing through 40-mesh standard sieve): $\geq 80\%$ Loss on drying: $\leq 8.0\%$
Lead (Pb): ≤ 5.0 mg/kg Total arsenic (as As): ≤ 3.0 mg/kg Total plate count: $\leq 50,000$ CFU/g Coliforms: ≤ 30 CFU/g Escherichia coli: < 10 CFU/g; ≤ 3.0 MPN/g Salmonella (25 g): Not detectable

Protocol

Hide preparation: Thaw and wash frozen hides, then place them in a drum. Water ratio: Hide:water = 1:1. Enzyme dosage: Add the enzyme preparation at 0.5% of hide weight and mix thoroughly. Process conditions: pH approximately 7.0; temperature 35°C. Processing: Start the drum and inspect dehairing after approximately 4 hours; continue until dehairing is complete. Scale-up check: Because leather type, source, and local operating conditions vary, conduct a small-scale test under identical production conditions before large-scale production. Process caution: Avoid excessive dosage or process variations. For lower-quality leather, control the procedure and timing with particular accuracy.

Advantages

Rapid hair-follicle loosening under mild reaction conditions. Conventional sodium sulfide dehairing acts on keratin disulfide bonds but generates large volumes of wastewater and can compromise leather quality. Protease can efficiently cleave the disulfide bonds of keratin and gently promote dissociation of elastic tissue. Compared with conventional chemical dehairing methods, enzymatic dehairing significantly reduces environmental pollution.

Storage and Shipping Information

Storage

Protect from light and keep at low temperature in a dry, well-ventilated

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Protect from light and keep at low temperature in a dry, well ventilated environment during transport and storage. When stored in the original sealed packaging in a cool, dry environment, the shelf life is 12 months. Do not store above 40°C.