

Keratinase

Cat. No. KGZ-001

Lot. No. (See product label)

Introduction

Description

Keratinase is a proteolytic enzyme preparation that degrades keratin, a fibrous structural protein rich in disulfide bonds found in feathers, wool, hair, horns, and nails. It hydrolyzes keratinous materials into peptides and amino acids under mild conditions.

Applications

Feed processing: degradation of feather meal and keratinous by-products to improve protein digestibility.

Leather and textile processing: modification of keratin-containing materials.

Detergent formulations: removal of keratin-based soils.

Waste treatment: biodegradation of keratin-containing waste such as feathers and hair.

Synonyms

Keratinase; Keratinolytic protease; Keratin hydrolase

Product Information

Source

Produced by microbial submerged fermentation (typical industrial preparation)

Appearance

Light yellow to brown powder

Form

Powder

EC Number

EC 3.4.21.- (serine-type endopeptidase, keratinolytic)

Optimum pH

Typically near neutral to slightly alkaline (confirm with batch COA)

Optimum temperature

Typically 40-60 °C (confirm with batch COA)

Specificity

Hydrolyzes peptide bonds within keratin and other keratinous protein substrates; active against the compact disulfide-crosslinked keratin structure.

Function

Catalyzes the hydrolysis of keratin into soluble peptides and amino acids, facilitating the conversion of keratinous waste into utilizable protein resources.

Substrates

Keratin (feathers, wool, hair, horn); general protein substrates

Grade

Industrial / feed grade (confirm grade with supplier)

Usage

Recommended dosage varies by substrate and process; typically applied at 0.05-0.5% by weight of keratinous material with process optimization by trial.

Usage and Packaging

Package

25 kg/bag or drum (customizable)

Storage and Shipping Information

Storage

Store in a cool, dry place below 25 °C in the original sealed packaging, protected from direct sunlight. Shelf life: 12 months under recommended conditions.