

## AC Kerazyme® Relevant Patents

***This document may be used as a reference to patents that are possibly relevant to the use of our product in cosmetic applications. Active Concepts recommends that each end product be thoroughly researched and reviewed prior to launching a product with specific claims. We have presented these patents in good faith, however, Active Concepts cannot warranty that these are the only existing patents. It is imperative that each customer search for relevant patents to ensure infringement does not occur.***

**Code:** 16594  
**INCI Name:** Hydrolyzed Keratin & Trametes versicolor Extract  
**CAS #:** 69430-36-0 & 999999-99-4  
**EINECS #:** 274-001-1 & 310-127-6

Type of Patent	Patent Number	Title of Patent	Comments
United States Patent	USP# 5,889,212	Reformation of keratinous fiber cross links – Novo Nordisk	The patent describes the use of an oxidoreductase to reform keratinous fiber crosslinks broken in an initial reducing step. In contrast, the <i>Trametes versicolor</i> Extract in AC Kerazyme® helps to repair damage, enhance strength and improve style retention by cross linking hydrolyzed keratin to hair. AC Kerazyme® will not act as a reducing agent to break hair's disulfide bonds and will not serve to re-establish broken disulfide bonds. Later claims include mediators useful as hair dyes with no mention of hydrolyzed proteins.
United States Patent	USP#6,121,013	Method for cross-linking protein by using enzyme – Amano Pharmaceutical	This patent focuses on the use of purified enzymes whereas AC Kerazyme® uses <i>Trametes versicolor</i> Extract to achieve cross-linking. While this extract may well contain oxido-reductases, including laccase, the extract has not been refined to produce purified enzymes, and thus fall outside of these patents.