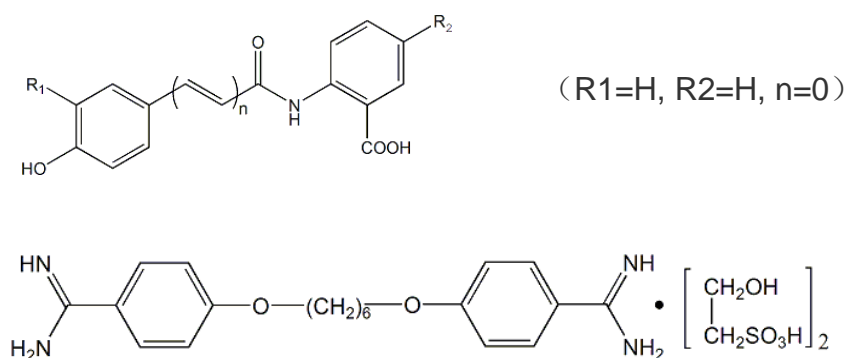


## Key Feature

Atdf ® SP-150 S is inclusion complex of Dihydroavenanthramide D ,Hexamidine Dissethionate and  $\beta$ -cyclodextrin,with the abilities of sterilization, anti-dandruff, anti-itch, and anti-inflammation. Atdf ® SP-150 S is suitable for the formulations of anti-dandruff and anti-acne products.

**INCI** Dihydroavenanthramide D ,Hexamidine Dissethionate , $\beta$ -cyclodextrin

## Chemical Structure



**Solubility** Alcohol-soluble

## Properties

Atdf ® SP-150 S has strong activities of sterilization, anti-dandruff, anti-itch, and anti-inflammation.

### 1 Potent sterilization

Atdf ® SP-150 S has a wide spectrum of activity against bacteria, fungi and yeasts, including the Gram (+) bacterias, Gram (-) bacterias, Fungis and Yeasts. The Malassezia is sensitive to Atdf ® SP-150 S. In addition, the ingredients of Atdf ® SP-150 S are very safe and mild that it is widely used in the anti-dandruff and anti-acne products.

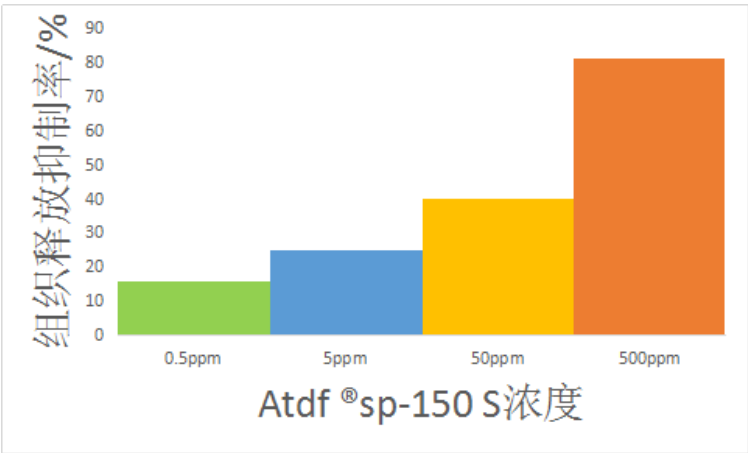
Microorganism	Model	MIC/ $\mu\text{g}\cdot\text{mL}^{-1}$	MMC/ $\mu\text{g}\cdot\text{mL}^{-1}$
Pityrosporum	NCTC 0218	12.4	100
Propionibacterium acnes	NCTC 521	0.1	12.4

### 2 Anti-itch

Histamine is a main pruritus mediator relieved from mast cell in sensitive and dry skin. Atdf ® SP-150 S significantly inhibits mast cell producing histamine to effectively alleviate

itching and redness. Therefore, Atdf® SP-150 S is suitable for relieving dandruff and the asteatotic eczema caused by seasonal changes.

The Inhibition of substance P evoked histamine release caused by a series of concentration of Atdf® SP-150 S as follows.



### 3 Anti-inflammation

The inflammatory response is initiated by many inflammatory mediators. Atdf® SP-150 S effectively inhibits the expansion of blood vessels and the increase of permeability caused by histamine, also prevents skin irritation caused by secondary inflammation. Meanwhile, Atdf® SP-150 S can reduce inflammatory response by decreasing the secretion of multiple pro-inflammatory mediators including histamine, IL-1 $\beta$ , TNF- $\alpha$ .

## Applications

1 Anti-dandruff products: Shampoo and other hair care products.

Atdf® SP-150 S effectively inhibits the growth and reproduction of Malassezia.

2 Anti-acne and anti-inflammatory formulations.

Atdf® SP-150 S can inhibit inflammatory mediators and promote acne repair.

## Specification

Item	Standard
Appearance	Transparent solution
odor	weak
Assay	≥9.5%
Mass spectrum	Conform
HPLC	Conform
Heavy Metal	≤10ppm
T. P. C.(cfu/gm)	≤100

## Formulation Tips

Incorporated in cosmetic formulations at low temperature

## Package

Units of 5 kg, 25 kg

## Storage

Storage at room temperature in the shade

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