

## Adsorption ability of Hymagic™-AcHA

The skin affinity and adsorption ability of Sodium Acetylated Hyaluronate (Hymagic™-AcHA) was carried out using adsorption rate.

### 1. Method

Test the adsorption rate of Hymagic-AcHA and HA with same concentration.

### 2. Materials

Samples: Hymagic-AcHA and HA ( $M_w < 100\text{kDa}$ ) aqueous solution, with same concentration of 0.05% and 0.1% .

Instruments: Ultraviolet-visible spectrophotometer.

### 3. Volunteers

30 healthy subjects of 20~45 years old.

### 4. Operation

30 healthy subjects are divided into two groups, one group for 0.05% solution group, another for 0.1% solution group. First, fix the test box (3cm\*3cm) on the left and right forearm of subjects, then apply 200μL Hymagic-AcHA / HA solution on the fixed area. After 10 minutes application, wash the test area with 8ml water, and detect the content of Hymagic-AcHA / HA of rinse solution, then evaluate the adsorption rate of Hymagic-AcHA / HA on skin surface.

$$\text{Adsorption rate(\%)} = 1 - \frac{\text{sample content of rinse solution(g)}}{\text{total sample content(g)}}$$

### 5. Results

Results show that, the adsorption rate of Hymagic-AcHA group is far more than HA group after washing, means that Hymagic-AcHA has better skin affinity ability than HA.

Table 1. The comparison of adsorption ability

Sample solution	Hymagic-AcHA group	HA group
0.05% solution	35.42%	5.32%
0.1% solution	64.77%	8.29%

### 6. Conclusion

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Hymagic-AcHA can adhere firmly on skin surface even after washing, indicating that Hymagic-AcHA owns high affinity to epidermis providing long-lasting moisturizing and softening efficacies.