

Amino acid-based surfactant leading naturally volume-up hair

“SOFTILT™AX-L”, kind of the amino acid-based surfactant has Lauroyl methyl beta-alanine structure as main segment and sodium taurine as counter ion.

This surfactant brings “bounce and resilience” to hair when it used as shampoo base.

1 Features of the product

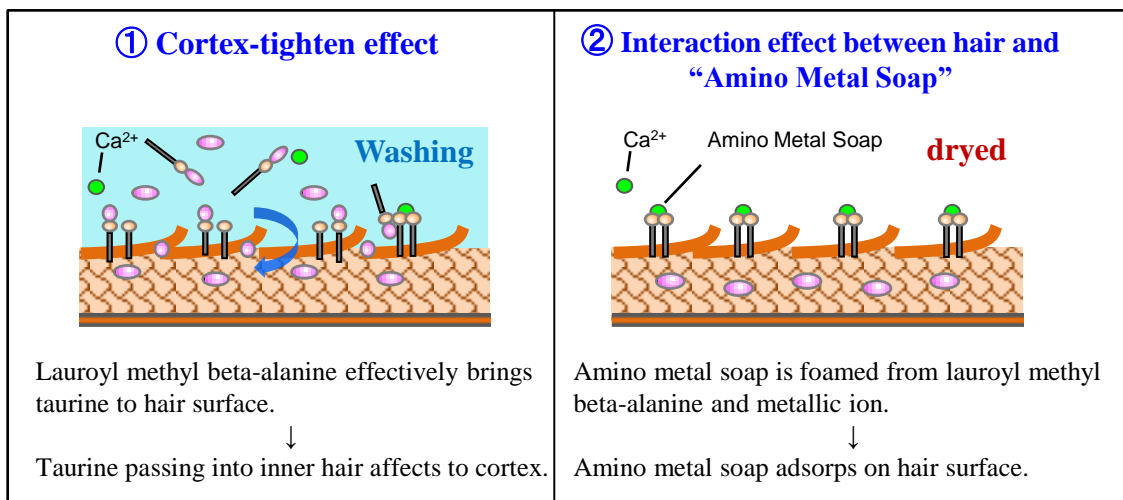
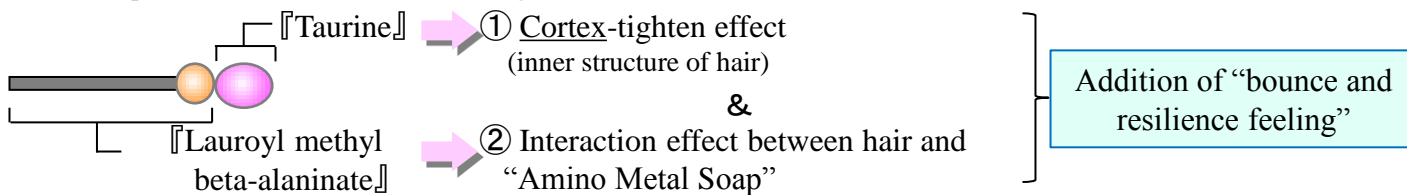
- **Amino acid-based surfactant made from N-Methyl-beta-Alanine**
SOFTILT™AX-L is the mild surfactant having natural amino acid structure.
- **“Bounce and resilience feeling” of hair after washing hair**
“Amino Metal Soap” affects hair surface, and taurine affects inner structure of hair. They bring bounce and resilience feeling from outer side and inner side of hair.
- **Viscosity improving ability in mild acidity**
Remarkable viscosity improving behavior is shown by combining with the ampholytic surfactant in acidulous.
- **Good complex formational ability**
The effect of hair conditioning at the rinse time is demonstrated by the complex formative ability with cationic polymer.

2 Information

INCI NAME	SODIUM TAURINE LAUROYL METHYL BETA-ALANINATE		
Specification	Appearance: Colorless-light yellow liquid / Slight specific odor		
	Concentration: 25%	pH(undiluted solution) : 8.5~9.5	
	Color (APHA) : <100	Sodium chloride (%) : <0.3	

3 Functionality

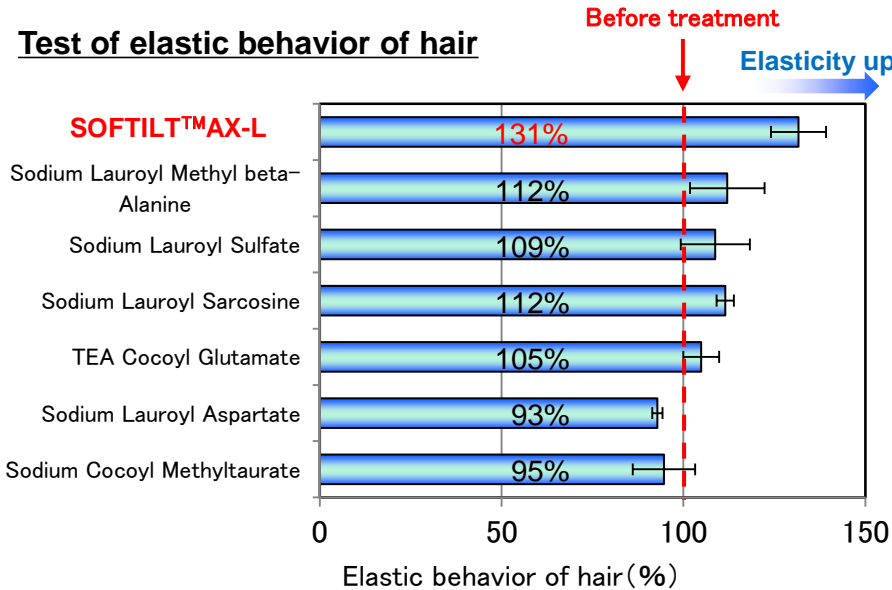
Concept of “bounce and resilience feeling”



SOFTILT™ AX-L (Hair Care)

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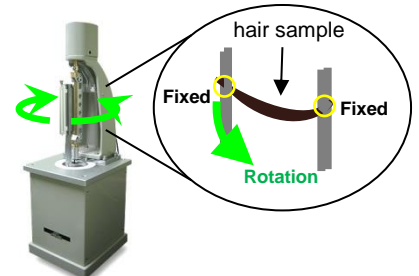
Test of elastic behavior of hair



Measuring equipment

Pure bending test machine (Kato Tech Co.)

It measure bend elastic constant and reversibility with bending hair or a film.



Estimation of "elastic behavior of hair" was evaluated as resistance value of bending hair.

▶ The elastic behavior of hair was improved (× 1.3)

Confirmation of hair formation

Amino acid-based surfactants	Before treatment	After treatment
SOFTILT™ AX-L		
Sodium Lauroyl Methyl beta-Alanine		
TEA Cocoyl Glutamate		

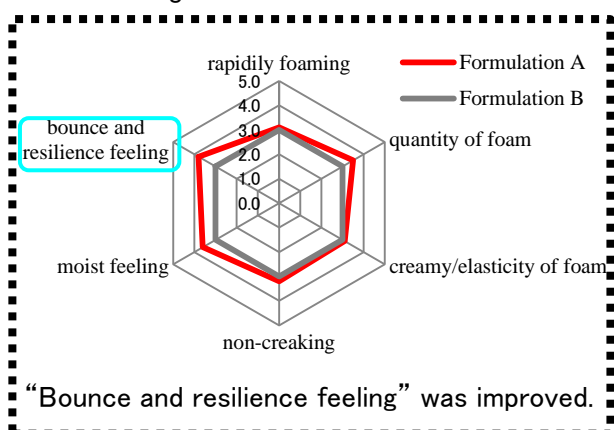
Methods

- 1wt% surfactant aq was prepared with 100ppm artificial hard water(U.S.hardness).
- After 5 minutes dipping damaged hair sample into water, washing it with 100ppm artificial hard water.
- After drying with towel, drying in constant temperature and humidity room overnight.
- Formation of hair was confirmed.

Sensory test

Sample Name	Quantity (wt%)	
	Formulation A	Formulation B
Sodium Taurine Lauroyl Methyl beta-Alaninate	42	—
Sodium Lauroyl Methyl beta-Alaninate	—	35
Cocamidopropyl Betaine	17	17
Polyquaternium-10	0.5	0.5
Citric Acid	proper quantity	proper quantity
Water	balance	balance
pH:5.8	100.0	100.0

※ Average of 10 male and 10 female



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4 The recipe for instance (Shampoo)

Formulation for shampoo 1 (High concentration type)

Ingredient (Product Name)	Active component (wt%)	INCI Name	Compounding ratio (wt%)
SOFTILT™AX-L	25	Sodiumtaurine Lauroyl methyl beta-Alaninate	30.0
Nissan Anon™BDF-R	30	Cocamidopropyl Betaine	15.0
Stafoam™DL	100	Lauramide DEA	2.0
Macbiobride™MG-T	75	PEG-120 Methyl Glucose Triisostearate	0.8
Reogado MGP *	100	Polyquaternium-10	0.5
DPG	100	Dipropylene Glycol	2.0
Citric acid	100	Citric acid	proper quantity
Water	100	Water	balance
Appearance		Colorless-light yellow liquid	
pH(undiluted solution)		5.8	
Viscosity (mPa·s, 25°C)		2510	

* LION Corp. Products

Formulation for shampoo 2 (Basic type)

Ingredient (Product Name)	Active component (wt%)	INCI Name	Quantity (wt%)
DIAPON™K-SF	30	Sodium Taurine Lauroyl methyl beta-Alaninate	20.0
Nissan Anon™BDF-R	30	Cocamidopropyl Betaine	15.0
SOFTILT™AX-L	25	Sodium Taurine Lauroyl methyl beta-Alaninate	8.0
Stafoam™MF	100	Cocamide MEA	2.0
Macbiobride™MG-T	75	PEG-120 Methyl Glucose Triisostearate	0.8
Reogado MGP *	100	Polyquaternium-10	0.5
Citric acid	100	Citric acid	proper quantity
Water	100	Water	balance
Appearance		Colorless-light yellow liquid	
pH(undiluted solution)		5.8	
Viscosity (mPa·s, 25°C)		2510	

* LION Corp. Products

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