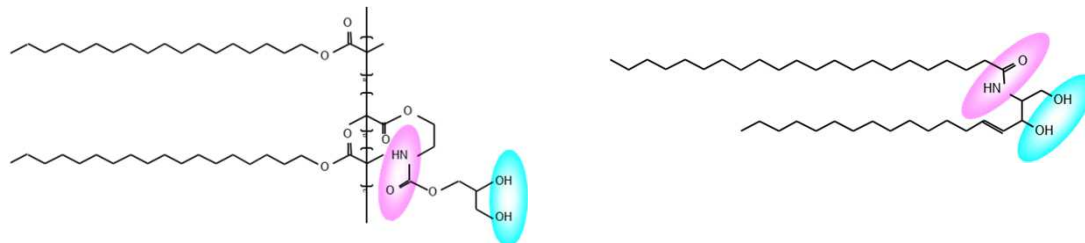


Ceracute®-F、L(Skin-Care)

1 What is Ceracute®

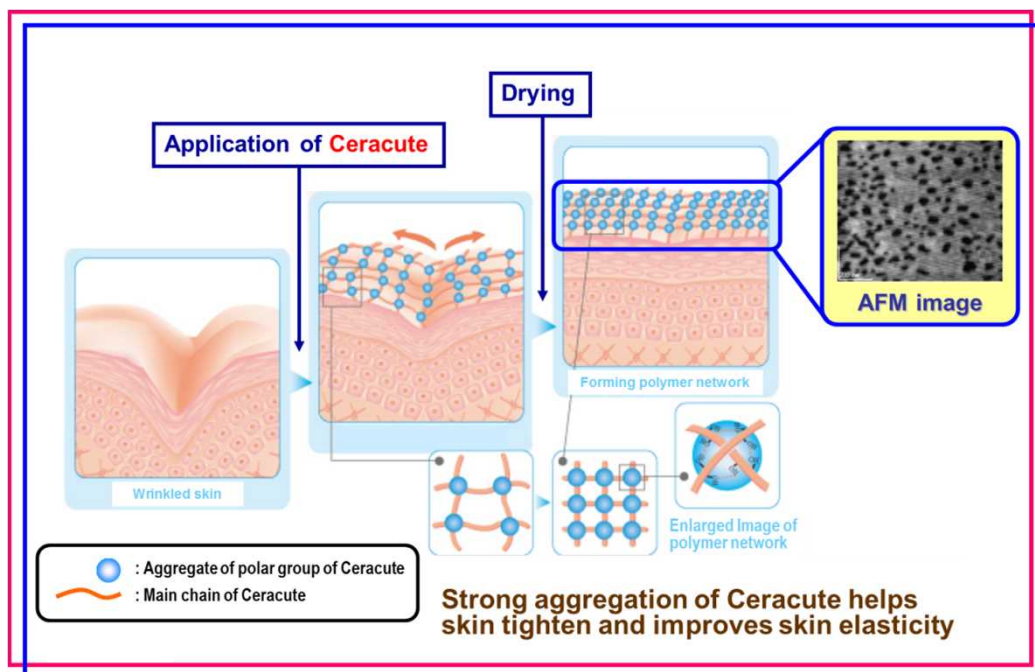
Ceracute® is the NOF's novel functional polymer designed imitating natural Ceramide which is main component of intracellular lipids.



Chemical Structure of Ceracute® and natural Ceramide (Ceramide2)

2 Feature of Ceracute®

- ① Anti-wrinkle efficacy because Ceracute® film is shrunk creating the hydrogen bond among polymer molecules.
- ② Anti-sagging efficacy because the film soften just below body temperature.
- ③ No strained feelings due to flexibility of Ceracute film.
- ④ Good affinity to skin and hair due to ceramide-mimetic structure.

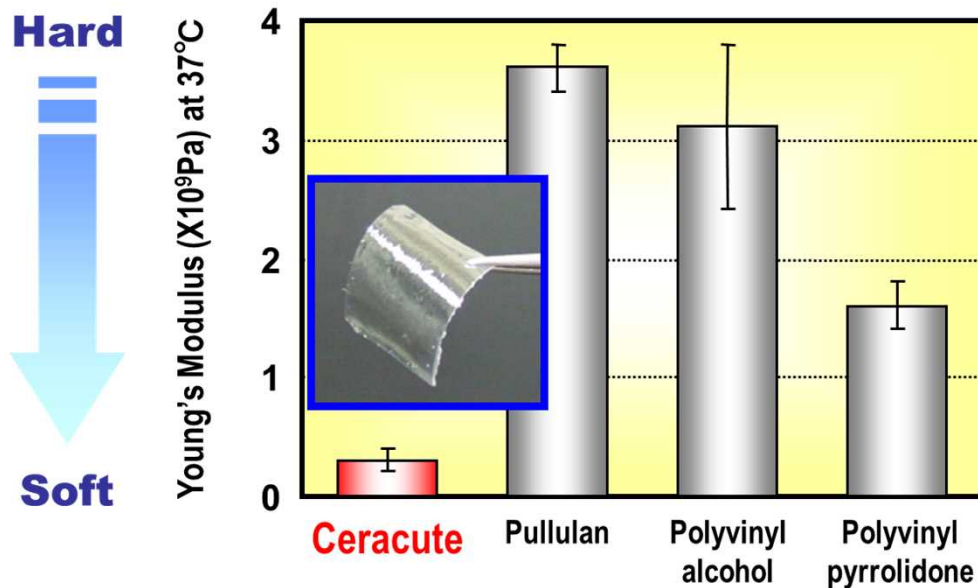


3 Lineup of Ceracute®

Product	INCI Name
Ceracute®-F	Glycerylamidoethyl Methacrylate / Stearyl Methacrylate Copolymer
Ceracute®-L (5% active)	Glycerylamidoethyl Methacrylate / Stearyl Methacrylate Copolymer, Glycerin, Butylene Glycol

4 Film Property

Elastic modulus of films

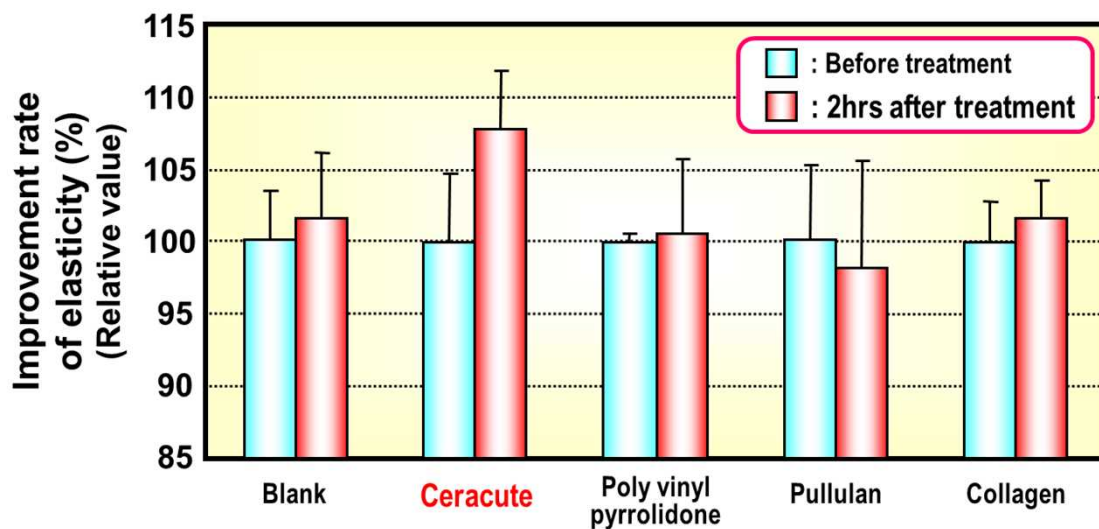


Ceracut[®] forms more flexible film than conventional polymers

5 Skin Elasticity

【Test Method】

1. Application of polymer solution (1.0 wt%)
2. Measurement of skin elasticity after 2 hours from the treatment # Instrument : Cutometer (Analysis method : P mode)



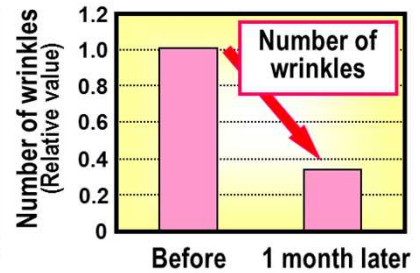
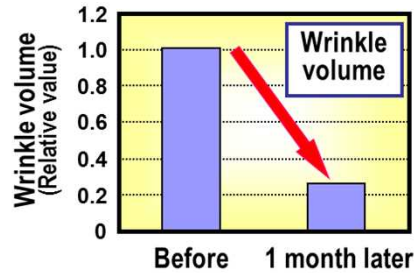
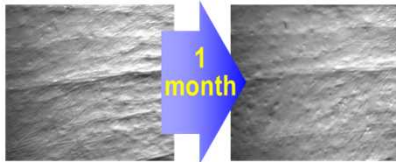
Ceracut[®] quickly improves skin elasticity

6 Anti-Wrinkle Effect (Continuous Application)

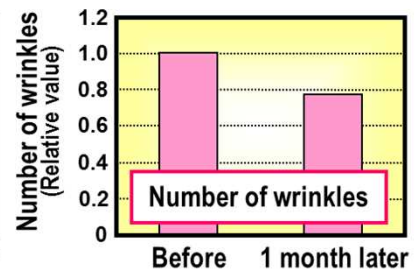
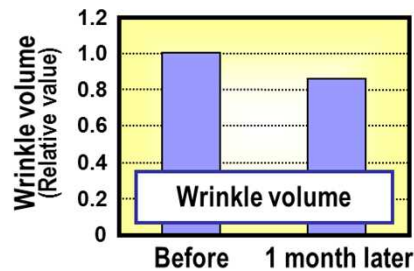
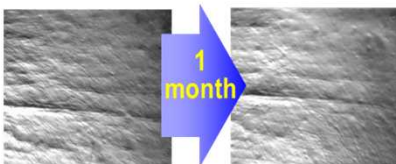
【Test Method】

1. Application of 20 wt% Ceracut-L aq. dispersion on eye area of 8 female volunteers (twice/day)
2. Making replicas of wrinkles after 1 month
3. Evaluation of the replica by the method of 3D imaging analysis

Ceracut



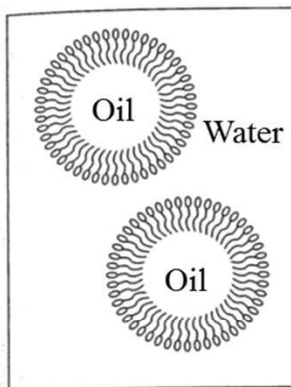
Placebo



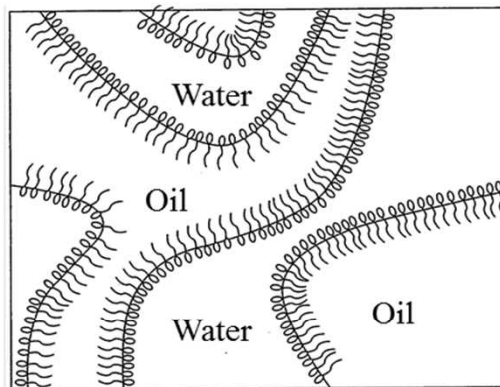
Anti-wrinkle effect of Ceracut[®] increases by continuous application

7 Preparation of Ceracut[®] Nano-Particle by BCME technology

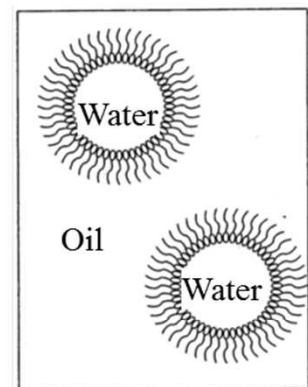
The kind of micro-emulsion



O/W type



Bycontinuous type(BCME)



W/O type

Feature

- Ultralow interfacial tension
- Ability to solubilize both aqueous and oil

Application

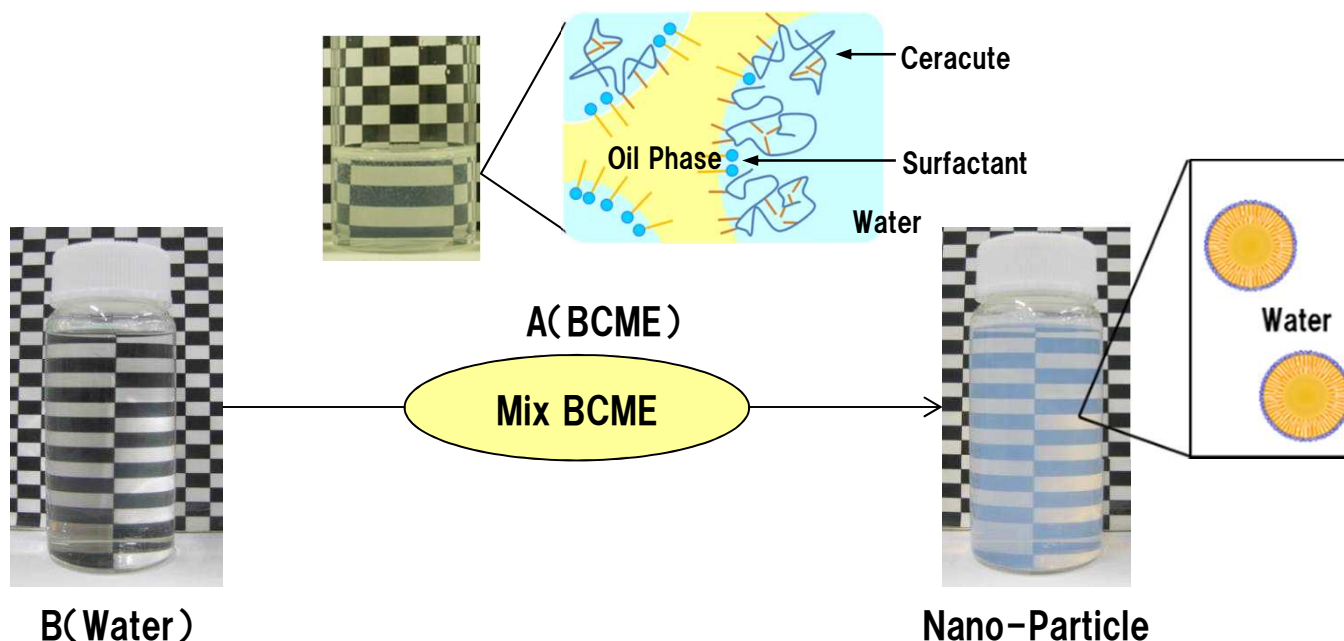
- Make-up remover
- **Nano-emulsion**

Formulation of Ceracut[®] Nano-Particle

【Preparation Method】

- ① Mix A phase at 80°C
- ② Add A phase into B phase and mix uniformly at R.T.

Product			INCI Name	wt%
A	1	Ceracut [®] -L	Glycerylamidoethyl Methacrylate / Stearyl Methacrylate Copolymer, Glycerin, Butylene Glycol	2.0
	2	–	Glycerin	0.8
	3	–	Water	0.4
	4	–	PEG-20 Phytosterol	0.5
	5	–	Macadamia Ternifolia Seed Oil	0.3
	6	Parleam [®] 4	Hydrogenated Polyisobutene	0.2
B	7	–	(Preservatives, pH adjuster)	q.s.
	8	–	Water	Balance
Total				100.0



Various oils can be capsuled when combined with BCME technology



NOF CORPORATION

4-20-3, Ebisu, Shibuya-ku, Tokyo 150-6012 Japan
 Phone : +81 3 5424 6704, Fax : +81 3 5424 6810
<http://www.nof.co.jp/english/pdf/catalog.pdf>
 E-mail : yukagizyutu@nof.co.jp