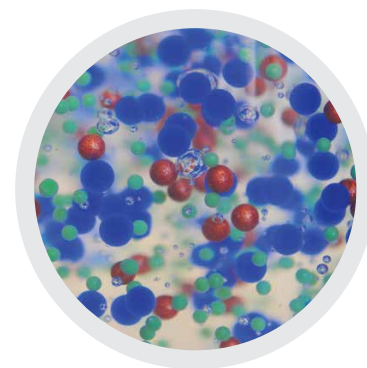


# Softspheres™

## Europe and China Program



Agar is a natural polysaccharide, extracted from algae, able to form aqueous gels by natural cross-linking.

To be soft enough for being crushed onto the skin and deliver the entrapped active material, the gel should present a very large mesh size, which is not compatible with efficient retention of small

molecules. Softspheres™ use the properties of a cationic and amphiphilic polymer, a copolymer to interact with active molecules by means of ionic bonds and / or hydrophobic interactions.

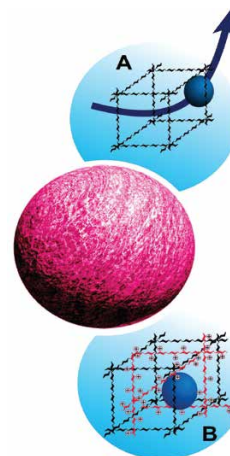
The complex is too large to move through the agar matrix and the bonded molecule is thus trapped within the soft bead.

### Composition

- Agar
- Restraining Polymer:
  - Polyquaternium-11
  - PG-Hydroxyethylcellulose
  - Stearaldimonium Chloride
- Colorants / Pigments
- Active Ingredients / Oils / Vitamins / Fragrances / ...

### Size

- Size range : 1.0 to 2.8 mm
- 3 standard sizes:
  - a = 2.20 - 2.80 mm
  - b = 1.60 - 2.20 mm
  - m = 1.00 - 1.60 mm
- Stable in pH 2 - 10, in surfactants, at temperatures up to 60° C



In a plain Agar bead (A), the mesh size of the matrix is too large to trap active molecules.

In a mixed agar/copolymer-bead (B, Softsphere™ structure), the active molecule is trapped within the bead by means of ionic bonds and hydrophobic interactions with the copolymer.

### Formulations

Recommended use levels range from 2.5 to 10% depending on the diameter:

- Transparent gel
- Shower gel & shampoo
- Emulsion
- Soap

### Applications

Examples of active ingredients we have successfully entrapped in Softspheres™:

- **Anionic:** colorants, hyaluronic acid
- **Lipophilic:** tocopherol, vitamin A, natural oils, ceramides
- **Macromolecules:** enzymes
- **Pigments:** iron, titanium & zinc oxides
- **Miscellaneous:** emulsions, fragrances

- **US 8025892B2**  
Cosmetic particulate gel carriers for topically applied active agents
- **US 7993677B2**  
Density-controlled particulate suspensions for foodstuff, cosmetic, pharmaceutical and other uses



KFL-135C

## Revitalizing Clear Serum with Softspheres™ - Pearl Tan & Pearl White

#### Part 1

- |  |        |
|--|--------|
| • Deionized Water - Water                        | 43.50% |
| • Carbopol® Ultrez 10 - Lubrizol, Inc.: Carbomer | 0.20%  |

#### Part 2

- |  |        |
|--|--------|
| • Glycerin U.S.P. Natural 96% - Ruger Chemical: Glycerin   | 40.40% |
| • CES-1104 - Avantor/Kobo Products: Dimethicone (And) Water (And) Glycerin (And) Pentylene Glycol (And) Dimethicone/Vinyl Dimethicone Crosspolymer (And) Amodimethicone (And) Carbomer (And) Phenoxyethanol (And) Sodium Hydroxide (And) Disodium Edta | 10.50% |
| • Euxyl® PE 9010 - Schulke & Mayr: Phenoxyethanol (And) Ethylhexylglycerin   | 0.90%  |

#### Part 3

- |  |       |
|--|-------|
| • Sodium Hydroxide 5 N (20%) weight/volume) - Ricca Chemical Company: Water (And) Sodium Hydroxide | 0.50% |
|--|-------|

#### Part 4

- |  |       |
|--|-------|
| • SpS-5coral56a - Kobo Products: Water (And) Propylene Glycol (And) Pentylene Glycol (And) Mica (And) Tocopheryl Acetate (And) Polyquaternium-11 (And) Agar (And) Iron Oxides (CI 77491) (And) 1,2-Hexanediol (And) Caprylyl Glycol (And) Titanium Dioxide | 2.00% |
|--|-------|

- Sp-VEADC56a - Kobo Products: Water (And) Propylene Glycol (And) Tocopheryl Acetate (And) Mica (And) Agar (And) Polyquaternium-11 (And) Imidazolidinyl Urea (And) Titanium Dioxide (And) Phenoxyethanol (And) Parabens (And) Iron Oxides (CI 77491) 2.00%

#### Manufacturing Procedure:

1. Slowly disperse carbomer into water under slow mixing.
2. Add Part 2 to Part 1 and mix slowly until homogeneous.
3. Neutralize to the desired viscosity with Part 3.
4. Hand mix in Part 4.

#### Description:

This clear revitalizing serum contains CES-1104, an encapsulated elastomer gel which breaks upon application offering an instantly refreshing feel follow by a velvety silicone after feel. The Softspheres™, Sp-VEADC56a and SpS-5coral56a, add a colorful visual effect to the serum. Both of these Softspheres™ contain entrapped active Tocopheryl Acetate which is delivered to the skin upon breakage of the Softspheres™.

**KOBO**

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Trade Name	Average Size (mm)	Color	Delivered Ingredients	INCI Name
<b>New</b> SpS-5coral56a	2.2 - 2.8	Pearlescent Tan	Tocopheryl Acetate	Water (And) Propylene Glycol (And) Pentylene Glycol (And) Mica (And) Tocopheryl Acetate (And) Polyquaternium-11 (And) Agar (And) Iron Oxides (CI 77491) (And) 1,2-Hexanediol (And) Caprylyl Glycol (And) Titanium Dioxide
<b>New</b> SpS-5coral56b	1.6 - 2.2			
<b>New</b> SpS-5coral56m	1.0 - 1.6			
<b>New</b> SpS-BkFeO41a	2.2 - 2.8	Black	-	Water (And) Propylene Glycol (And) Pentylene Glycol (And) Polyquaternium-11 (And) Agar (And) 1,2-Hexanediol (And) Caprylyl Glycol (And) Iron Oxides (CI 77499)
<b>New</b> SpS-BkFeO41b	1.6 - 2.2			
<b>New</b> SpS-BkFeO41m	1.0 - 1.6			
Sp-AOPL41a	2.2 - 2.8	Pearlescent Pink	Prunus Amygdalus Dulcis (Sweet Almond) Oil & Tocopheryl Acetate	Water (And) Propylene Glycol (And) Prunus Amygdalus Dulcis (Sweet Almond) Oil (And) Polyquaternium-11 (And) Agar (And) Imidazolidinyl Urea (And) Mica (And) Phenoxyethanol (And) PEG-40 Hydrogenated Castor Oil (And) Titanium Dioxide (And) Tocopheryl Acetate (And) Red 30 Lake (And) Parabens
Sp-AOPL41b	1.6 - 2.2			
Sp-AOPL41m	1.0 - 1.6			
Sp-BkFEB41a	2.2 - 2.8	Metallic Grey	-	Water (And) Propylene Glycol (And) Mica (And) Polyquaternium-11 (And) Agar (And) Titanium Dioxide (And) Imidazolidinyl Urea (And) Phenoxyethanol (And) Iron Oxides (CI 77499) (And) Parabens
Sp-BkFEB41b	1.6 - 2.2			
Sp-BkFEB41m	1.0 - 1.6			
Sp-JbOTiO41a	2.2 - 2.8	White	Simmondsia Chinensis (Jojoba) Seed Oil	Water (And) Propylene Glycol (And) Agar (And) Polyquaternium-11 (And) Simmondsia Chinensis (Jojoba) Seed Oil (And) Imidazolidinyl Urea (And) Phenoxyethanol (And) Titanium Dioxide (And) Parabens
Sp-JbOTiO41b	1.6 - 2.2			
Sp-JbOTiO41m	1.0 - 1.6			
Sp-UM41a	2.2 - 2.8	Deep Blue	-	Water (And) Propylene Glycol (And) Agar (And) Polyquaternium-11 (And) Imidazolidinyl Urea (And) Ultramarines (And) Phenoxyethanol (And) Parabens
Sp-UM41b	1.6 - 2.2			
Sp-UM41m	1.0 - 1.6			
Sp-VApGP41a	2.2 - 2.8	Gold	Retinyl Palmitate	Water (And) Propylene Glycol (And) Agar (And) Polyquaternium-11 (And) Retinyl Palmitate (And) Imidazolidinyl Urea (And) Phenoxyethanol (And) Mica (And) Titanium Dioxide (And) Parabens (And) Iron Oxides (CI 77491)
Sp-VApGP41b	1.6 - 2.2			
Sp-VApGP41m	1.0 - 1.6			
Sp-VCTiOGH41a	2.2 - 2.8	Light Green	Magnesium Ascorbyl Phosphate	Water (And) Propylene Glycol (And) Agar (And) Polyquaternium-11 (And) Imidazolidinyl Urea (And) Phenoxyethanol (And) Chromium Hydroxide Green (And) Magnesium Ascorbyl Phosphate (And) Titanium Dioxide (And) Parabens
Sp-VCTiOGH41b	1.6 - 2.2			
Sp-VCTiOGH41m	1.0 - 1.6			
Sp-VCYOTR56a	2.2 - 2.8	Orange	Tocopheryl Acetate & Magnesium Ascorbyl Phosphate	Water (And) Propylene Glycol (And) Tocopheryl Acetate (And) Agar (And) Polyquaternium-11 (And) Imidazolidinyl Urea (And) Phenoxyethanol (And) Red 30 Lake (And) Magnesium Ascorbyl Phosphate (And) Iron Oxides (CI 77492) (And) PEG-40 Hydrogenated Castor Oil (And) Parabens
Sp-VCYOTR56b	1.6 - 2.2			
Sp-VCYOTR56m	1.0 - 1.6			
Sp-VEaAVGrP41a	2.2 - 2.8	Pearlescent Green	Tocopheryl Acetate & Aloe Barbadensis Leaf Juice	Water (And) Propylene Glycol (And) Agar (And) Polyquaternium-11 (And) Tocopheryl Acetate (And) Imidazolidinyl Urea (And) Aloe Barbadensis Leaf Juice (And) Mica (And) Titanium Dioxide (And) Chromium Hydroxide Green (And) Chromium Oxide Greens
Sp-VEaAVGrP41b	1.6 - 2.2			
Sp-VEaAVGrP41m	1.0 - 1.6			
Sp-VEaDC56a	2.2 - 2.8	Pearlescent White	Tocopheryl Acetate	Water (And) Propylene Glycol (And) Tocopheryl Acetate (And) Mica (And) Agar (And) Polyquaternium-11 (And) Imidazolidinyl Urea (And) Titanium Dioxide (And) Phenoxyethanol (And) Parabens (And) Iron Oxides (CI 77491)
Sp-VEaDC56b	1.6 - 2.2			
Sp-VEaDC56m	1.0 - 1.6			
Sp-VEaTR41a	2.2 - 2.8	Red	Tocopheryl Acetate	Water (And) Propylene Glycol (And) Polyquaternium-11 (And) Agar (And) Imidazolidinyl Urea (And) PEG-40 Hydrogenated Castor Oil (And) Phenoxyethanol (And) Tocopheryl Acetate (And) Red 30 Lake (And) Parabens
Sp-VEaTR41b	1.6 - 2.2			
Sp-VEaTR41m	1.0 - 1.6			