

**FVC-N40 (Viscocare-N40)**

**For Cosmetics/Personal care**

**Thickening-Stabilizing polymer**



- 1. Profile**
- 2. Property & Benefit**
- 3. Specification**
- 4. Thickening capability test**  
**(Water / pH range / Electrolyte/ Solvent)**
- 5. Application**

## FVC-N40 (Viscocare-N40)

Item	Polymer	Oil	Emulsifier
INCI Name	Hydroxyethyl acrylate & Sodium acryloyldimethyltaurate copolymer	Squalane	Polysorbate 60
CAS No	111286-86-3	111-01-3	9005-67-8
EINECS No	601-067-4	203-825-6	500-020-4
CHINA	listed in IECIC		
Physical form	Pre-neutralized white emulsion Liquid		

# Property & Benefit

## FVC-N40 (Viscocare-N40)

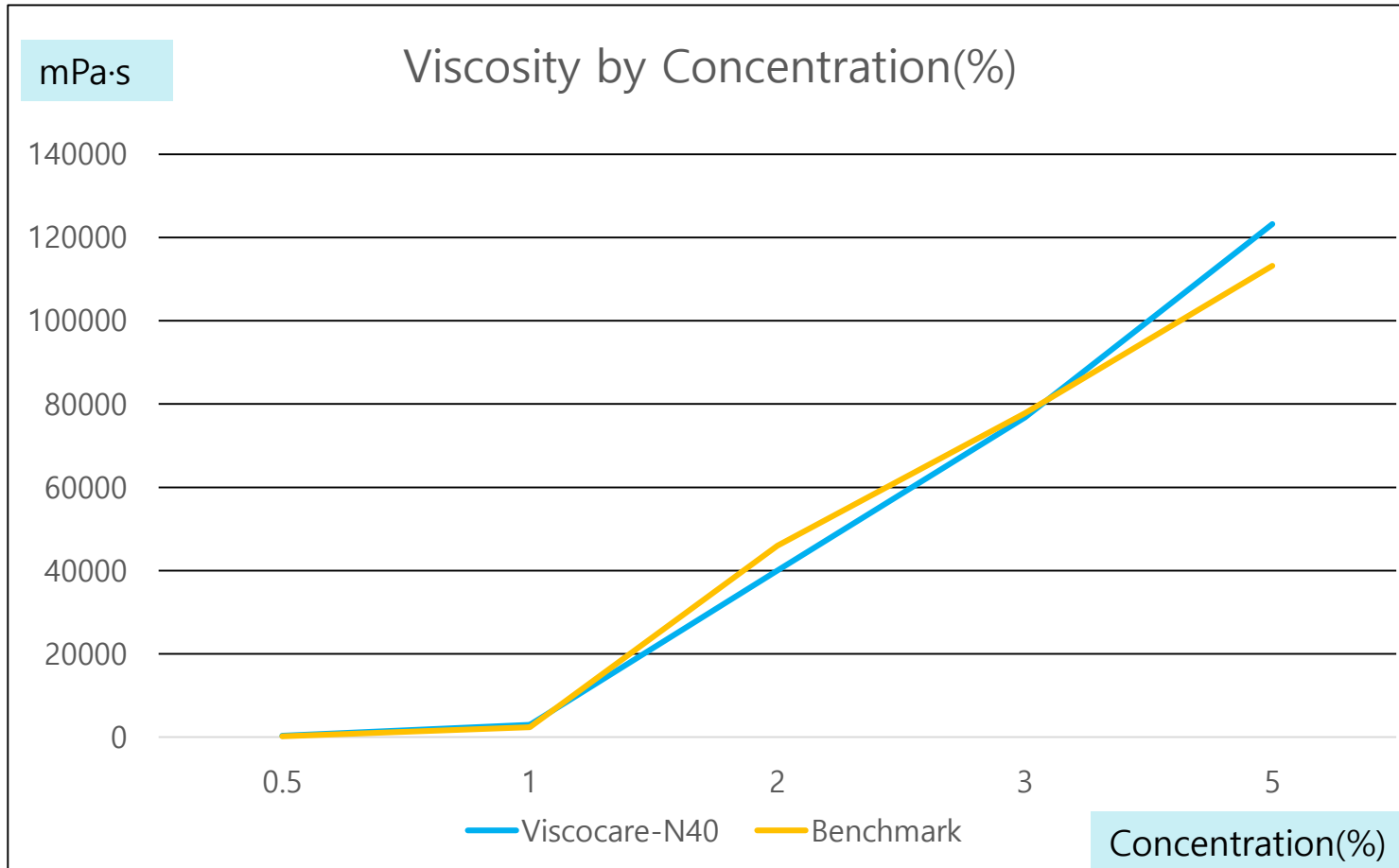
- Is a flowable emulsion-type composition consisting of Acryl polymer, Squalane and Polysorbate 60.
- Is very easy to use, just add to your formulation after mixing oil and water phases to enhance stability and modify rheology.
- Is convenient emulsifier, rheology modifier, thickener, and acting as a stabilizer.
- Add at all stages of the process, even cold & hot process is possible, and there is no need for neutralization before use
- Acts as a conditioning agent for the hair and prevents static electricity to facilitate hair care.
- Self-emulsifying and emulsifying up to 40% of oil
- Is possible to increase the viscosity in the pH range of 3.0-11, and it has excellent resistance to electrolyte and thickening power.
- Sensory profile :
  - Fresh, melt on contact with the skin, - Rapidly absorbed by the skin, - light, non-tacky touch.

## Specification of FVC-N40 (Viscocare-N40)

Property	Unit	Specification	Method
Appearance	-	Fluid emulsion	Visual
Odor	-	Characteristic	Sensory
Direct Viscosity	mPa.s	1,000 ~ 5,000	RVT, no3, 20rpm
Viscosity @3.0%	mPa.s	60,000 ~ 100,000	RVT, no6, 5rpm
pH @3.0% Sol'n	-	4.5 ~ 6.5	pH meter
3% Salt Viscosity(0.1%NaCl)	mPa.s	3,500 ~ 8,000	RVT, no4, 5rpm

# Thickening capacity

## Viscosity curve with concentration in DI Water



- **Objectives**

- Measure the viscosity at various concentrations and compare it to a benchmark

- **Methods**

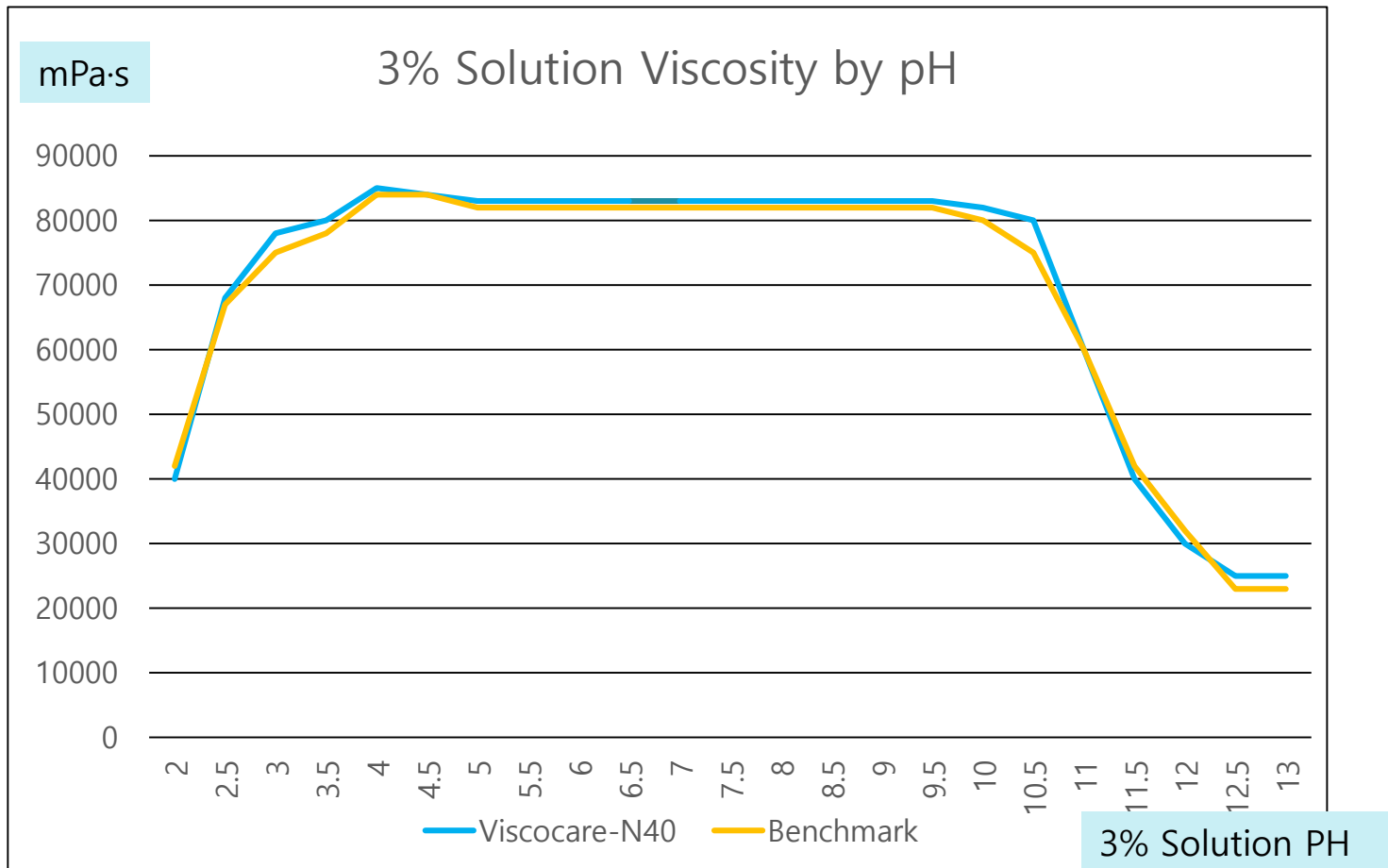
- Prepare solution of 0.5 – 5.0 % of FVC-N40 (Viscocare-N40).
- Using automatic agitation in low concentration
- In high concentration, using manual agitation
- RVT Viscometer

- **Result**

- The viscosity profile of FVC-N40 (Viscocare-N40) at various concentrations is very similar to

# Thickening capacity

## Thickening capacity over a wide pH range



- **Objectives**

- To check the viscosity according to the pH change and compare it with the benchmark

- **Method**

- 3% FVC-N40 (Viscocare-N40) solution in DI Water

- Add Lactic acid or 10%NaOH solution drop by drop to 3% FVC-N40 (Viscocare-N40) solution.

- Measure the viscosity and pH

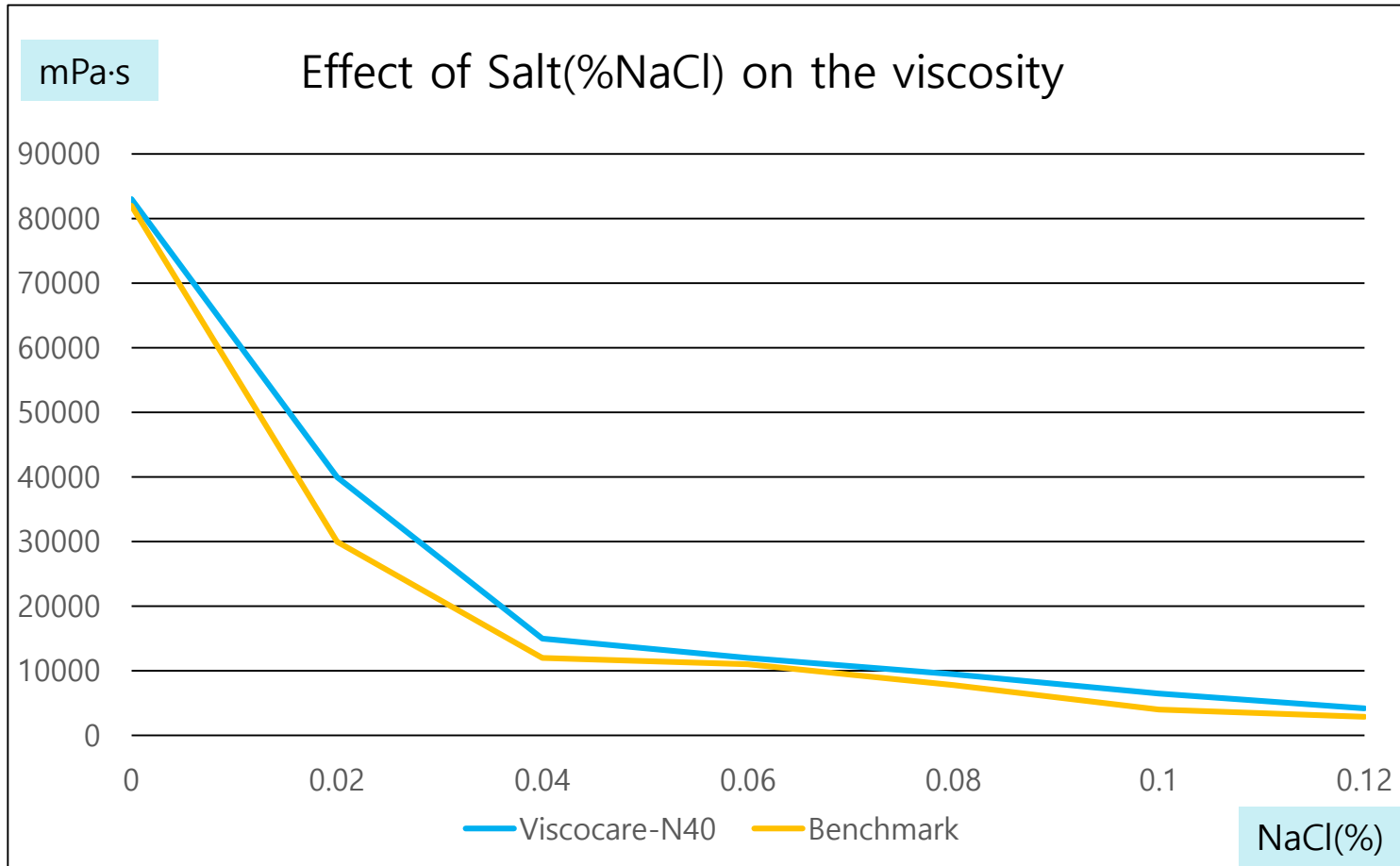
- **Test Result**

- Trend of viscosity variation is very similar

- Maintain high viscosity from pH 3 to 11 (wide range)

# Thickening capacity

## Thickening capacity in presence of electrolytes



### Objectives

- For the purpose of checking the viscosity resistance to the electrolyte

### Methods

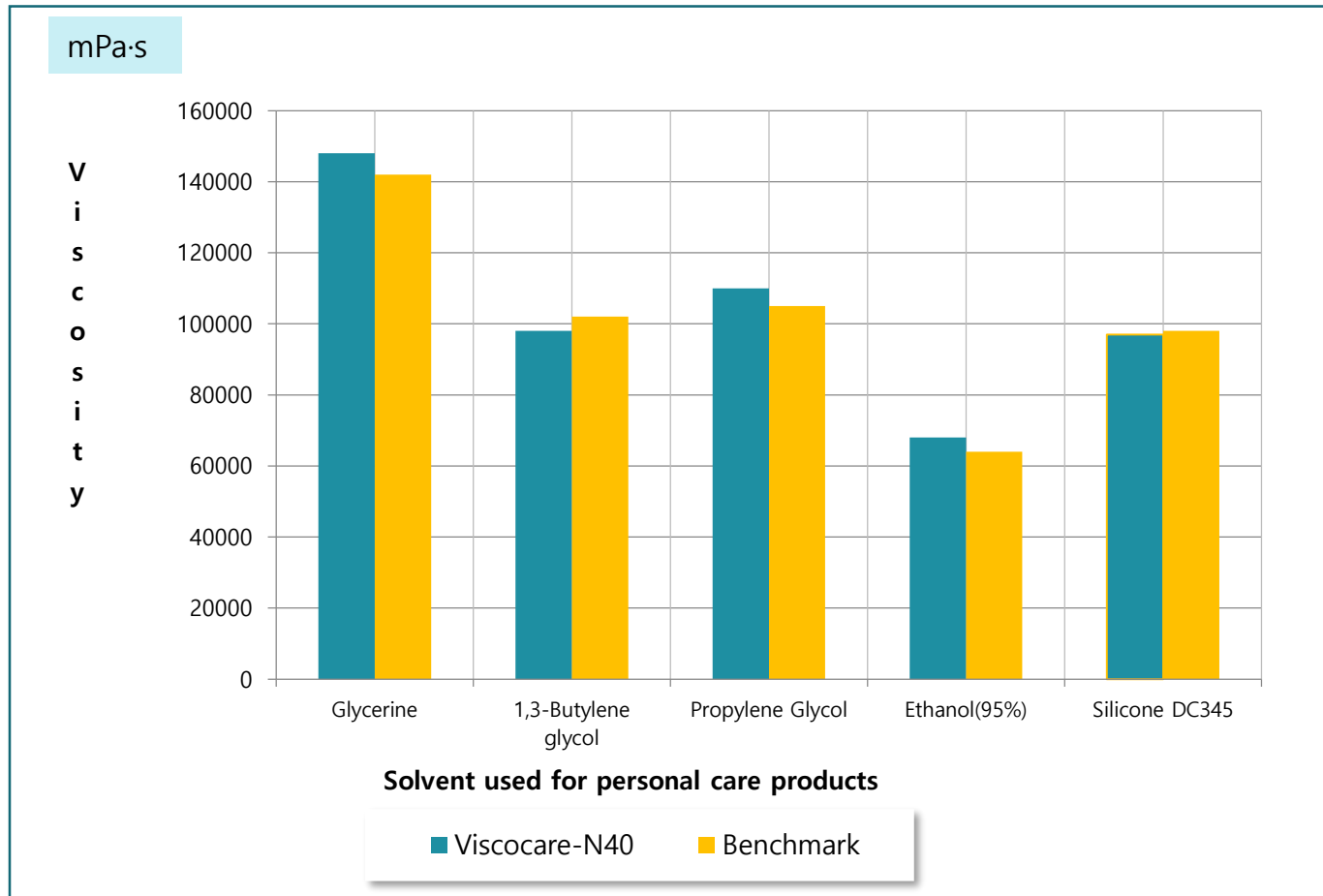
- Prepare 3% FVC-N40 (Viscocare-N40) solution in DI water
- Add various weight of NaCl to 3% FVC-N40 (Viscocare-N40) solution.
- Mix well and measure the viscosity.

### Test Result

- Decreasing trend of viscosity is similar

# Thickening capacity

## Thickening effect according to solvents



Test of Viscosity : Brookfield RVT , 5rpm, spindle no 6

### Objectives

- Viscosity of FVC-N40 (Viscocare-N40) mixed with various solvents used in personal care/cosmetics.

### Tested formula

- Solvent 50% (Glycerine, 1,3-Butylene glycol, ethanol, propylene glycol)
- FVC-N40 (Viscocare-N40) 3%, Water 47%  
(Silicone DC345 10%, Thickener 3%, Water 87%)

### Test Result

- The viscosity properties are the same for FVC-N40 (Viscocare-N40) and Benchmark

- Foundations, colored gels
- Sun and after-sun products
- Mascaras
- Cleansing lotions
- Baby lotions
- Skin care products
- Products with heat-sensitive or pH-dependent active ingredients
- Skin whitening products
- Self-tanning products
- Bleaching agents
- Hair coloring products
- Gel-creams, emulsion-gels, etc.



# THANK YOU!

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