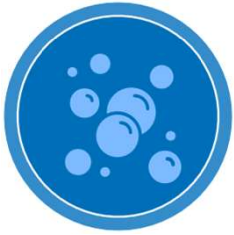


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Valida CR3 in Hair Care

Ellie Copsey / Personal Care Applications Specialist
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Foam Boosting

Higher foam height (Ross-Miles)
Longer foam Lifetime



Performance

Thickening surfactant systems
Enhanced suspensive properties



Sensorial experience

Creamier, denser foam
Premium rheology profile
Cuticle smoothing



Valida in
Hair Care

FORMULATION: BASIC SULFATE-FREE SHAMPOO

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				Negative Control	2% Valida CR3	5% Valida CR3	10% Valida CR3
				% w/w	% w/w	% w/w	% w/w
A	Deionized Water	Aqua	Carrier	75.35	73.35	70.35	65.35
A	Valida CR3	Aqua, Cellulose, Cellulose Gum, Sodium Benzoate and Citric Acid	Foam Booster, Thickener	-	2.00	5.00	10.00
B	Decyl Glucoside (50%)	Aqua, Decyl Glucoside	Surfactant	10.00	10.00	10.00	10.00
B	Coco Glucoside (52%)	Aqua, Coco Glucoside	Surfactant	6.00	6.00	6.00	6.00
B	Cocoamidopropyl Betaine (30%)	Aqua, Cocoamidopropyl Betaine	Surfactant	6.00	6.00	6.00	6.00
C	Citric Acid	Citric Acid	pH Adjuster	To pH 5.0-5.5	To pH 5.0-5.5	To pH 5.0-5.5	To pH 5.0-5.5
C	Euxyl PE9010	Phenxyethanol, Ethylhexylglycerin	Preservative	1.00	1.00	1.00	1.00
C	Crothix Liquid	Aqua, PEG-6 Carpylic/Capric Triglycerides	Thickener	4.00	4.00	4.00	4.00

FORMULATION: AMINO ACID SHAMPOOS

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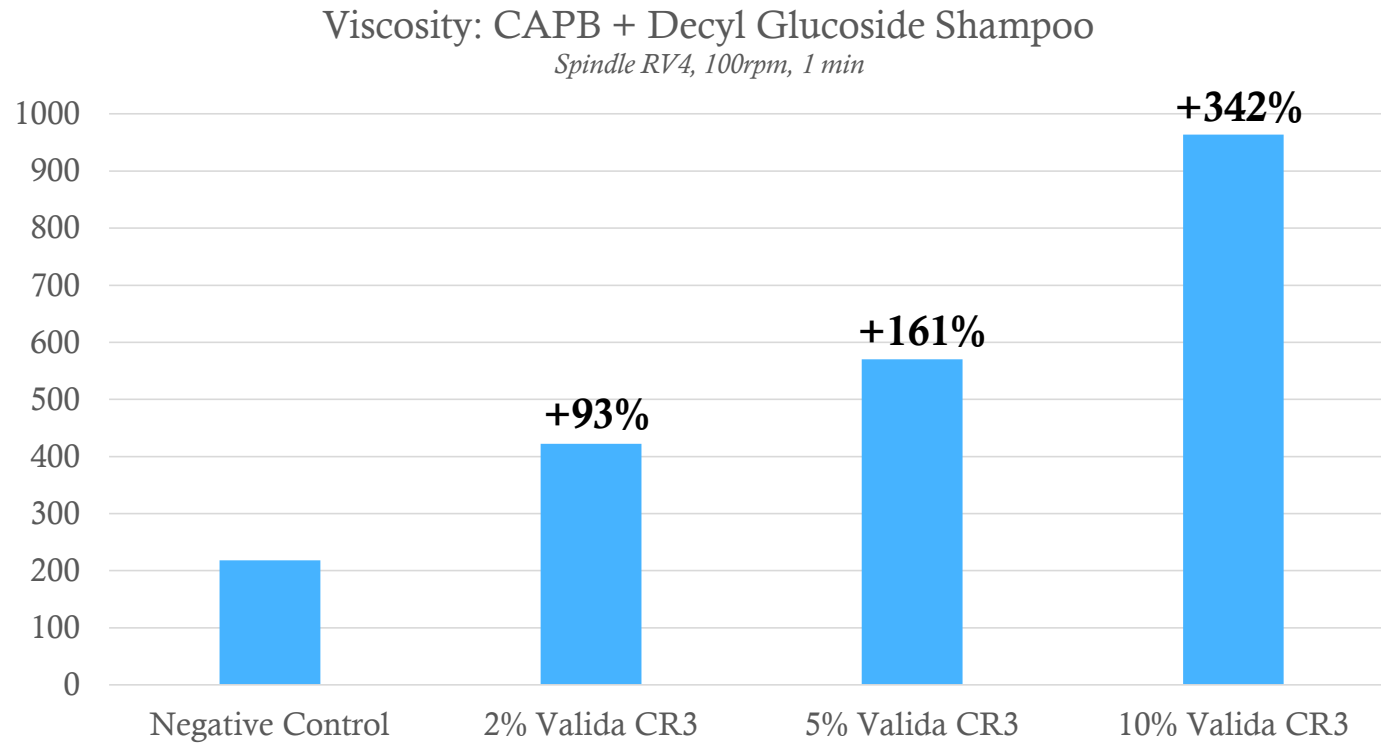
Phase	Trade Name	INCI	Function	With Polyquats		Without Polyquats	
				Benchmark	Valida CR3	Benchmark	Valida CR3
				% w/w	% w/w	% w/w	% w/w
A	Deionized Water	Aqua	Carrier	43.80	38.80	50.20	45.20
A	Valida CR3	Aqua, Cellulose, Cellulose Gum, Sodium Benzoate and Citric Acid	Foam Booster, Thickener	-	5.00	-	5.00
B	Polyquata 400	Polyquaternium-10	Conditioning	0.40	0.40	-	-
B	Deionized Water	Aqua	Carrier	5.00	5.00	-	-
C	APG-1214	Lauryl Glucoside	Surfactant	2.50	2.50	2.50	2.50
C	CMMEA	Cocoamide Methyl MEA	Surfactant	2.50	2.50	2.50	2.50
C	Napure C-HP	Sodium Taurine Cocyl Methyltaurate	Surfactant	20.00	20.00	20.00	20.00
C	TC-SHD	Cocoamidopropyl Hydroxysultaine	Surfactant	7.50	7.50	7.50	7.50
C	Citric Acid	Citric Acid	pH Adjuster	0.50	0.50	0.50	0.50
C	Amin CA30	Sodium Cocoyl Alaninate	Surfactant	15.00	15.00	15.00	15.00
C	Grepearl EGDS 3432	Glycol Distearate	Thickener, pearling	1.00	1.00	1.00	1.00
D	Euxyl PE9010	Phenxoyethanol, Ethylhexylglycerin	Preservative	0.80	0.80	0.80	0.80
D	Polyquata 280	Polyquaternium-22	Conditioning	1.00	1.00	-	-

Thickening of Surfactant Systems

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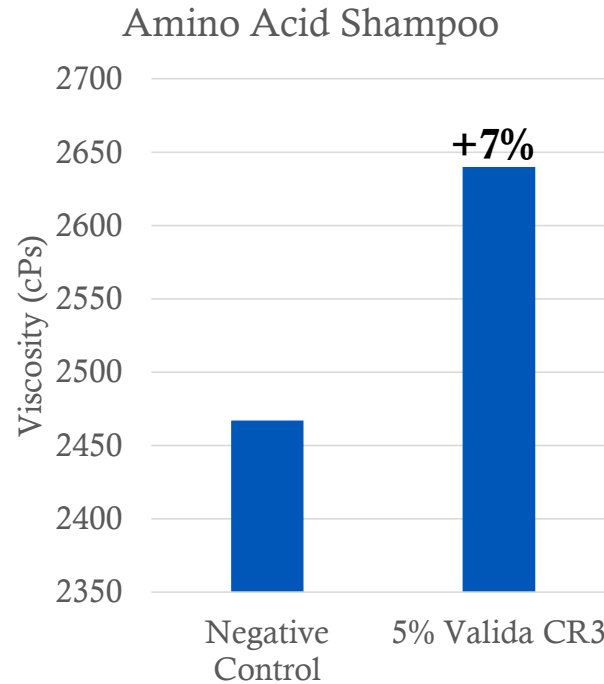
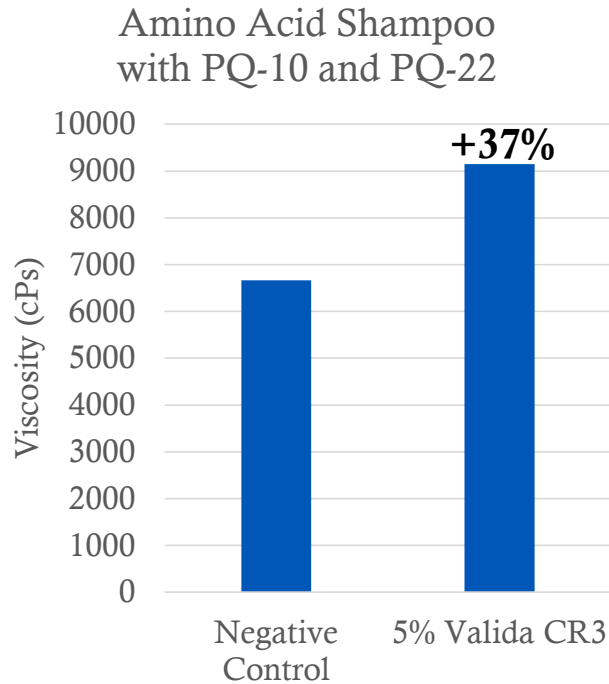
VISCOSITY: BASIC SULFATE-FREE SHAMPOO COCOAMIDOPROPYL BETAINE + DECYL GLUCOSIDE



Viscosity increases with increasing dosage level of Valida CR3

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VISCOSITY: AMINO ACID SHAMPOO WITH AND WITHOUT POLYQUATS



Viscosity increases with addition of 5% Valida CR3, but combining Valida CR3 with other ingredients that build viscosity (e.g. polyquats) will synergistically boost viscosity

Foam Boosting

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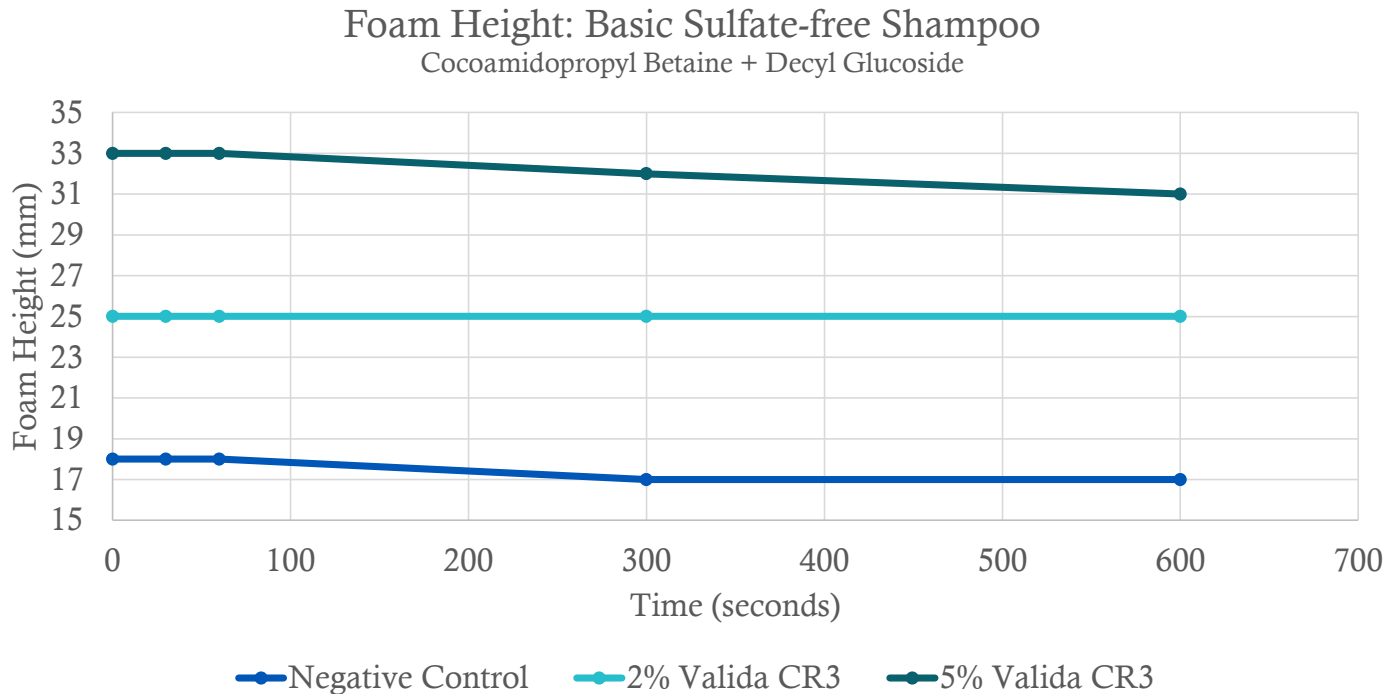
METHOD: FOAM HEIGHT

1. Add 25g Shampoo to 475g deionised water and mix gently by hand until homogenous, without forming foam
2. Using a paddle blade with holes, submerge the paddle until the top of the paddle is just below the water line
3. Using an overhead stirrer, mix at 600rpm for 1 minute
4. Observe foam height at defined time points

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FOAM HEIGHT: SIMPLE SULFATE-FREE SHAMPOO COCOAMIDOPROPYL BETAINE + DECYL GLUCOSIDE

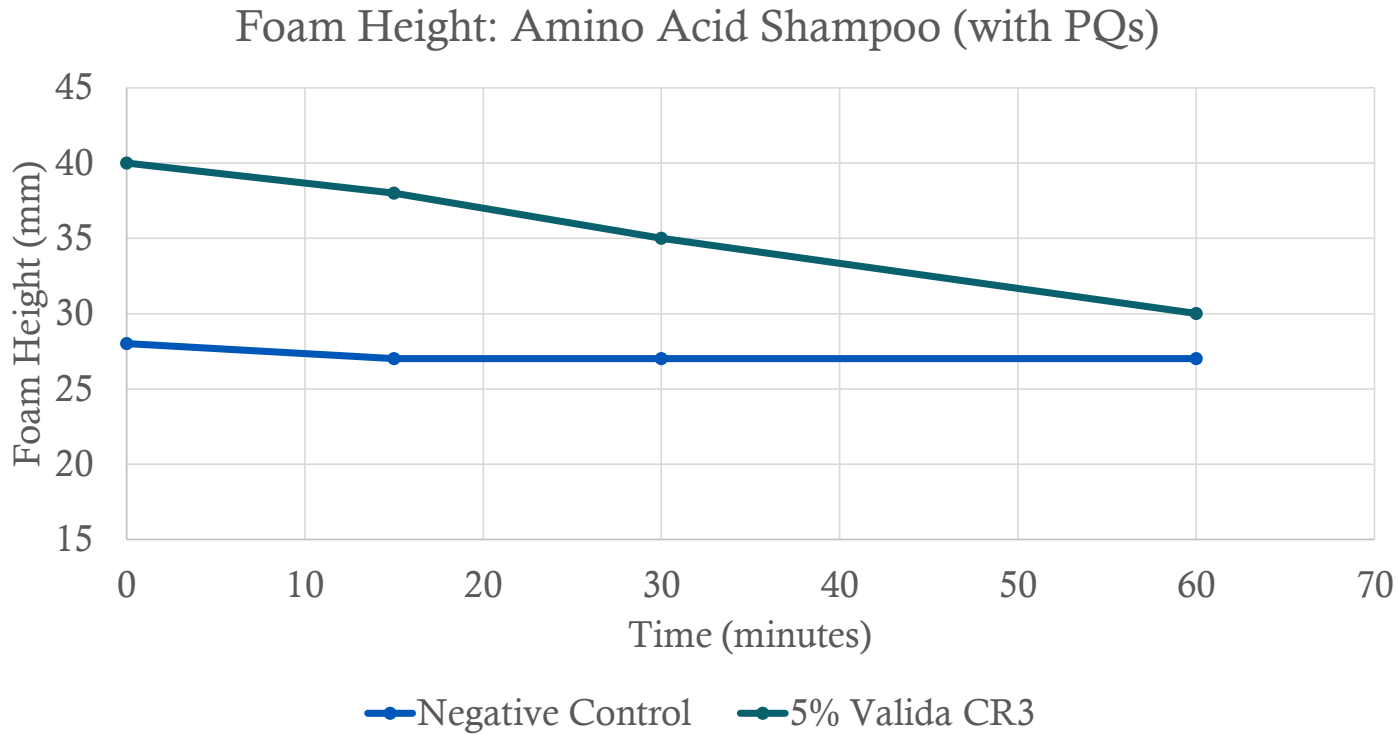
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Addition of Valida CR3 boosts foam height, and the increase foam height is maintained over 10 minutes

Usage of 2% Valida CR3 (as supplied) increased initial foam height by 38%

FOAM HEIGHT: AMINO ACID SURFACTANTS



Addition of Valida CR3 boosted initial foam height by 43%

The foam height with 5% Valida CR3 was still higher after 1 hour than the initial foam height of the control

Note: different time scale to other tests in this presentation

Note: data not yet complete on version without Polyquats

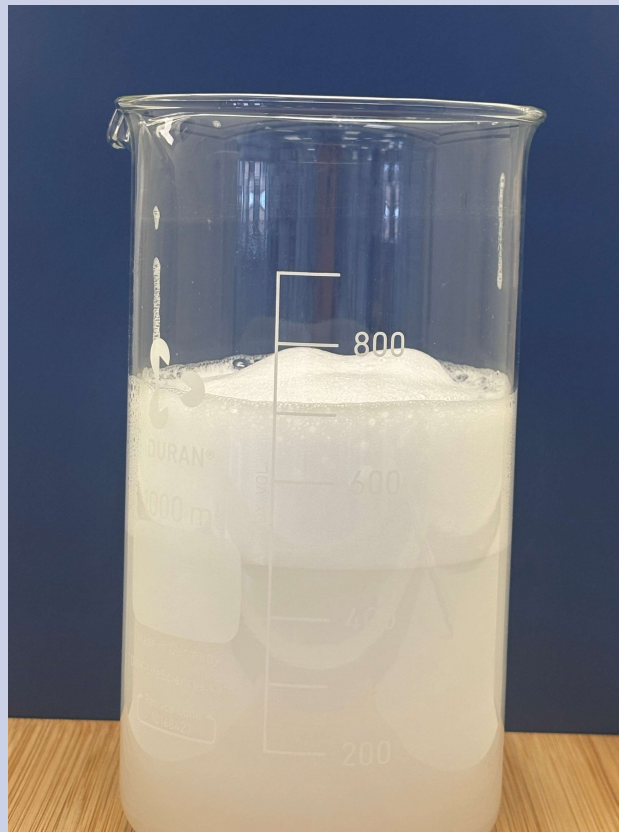
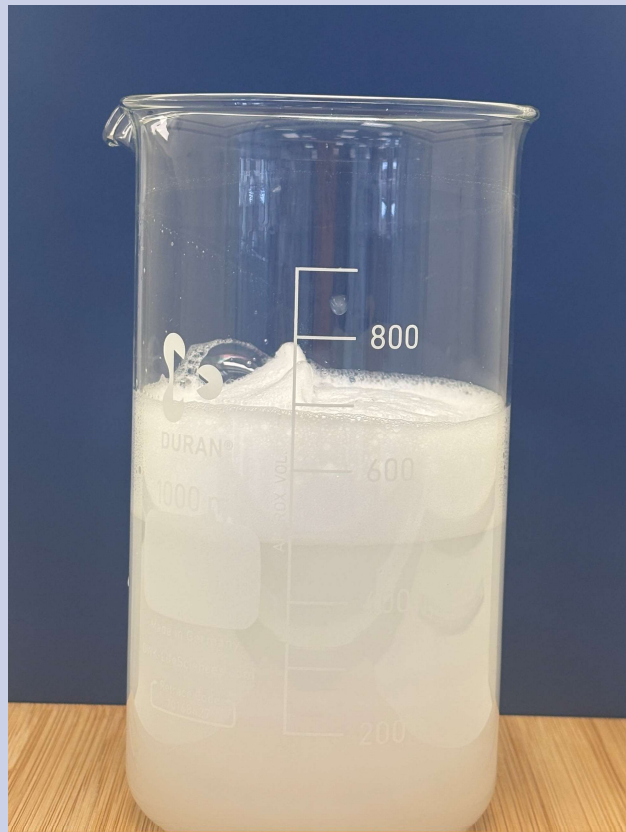
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INITIAL FOAM HEIGHT: AMINO ACID SHAMPOO

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Negative Control

5% Valida CR3



Bubble structure of CR3 is much smaller than control

FOAM SENSORY

Foam amount:

- Valida CR3 foams more than control

Sensory of Foam:

- Valida CR3 has a smaller bubble structure, making a **more dense and creamy feeling foam and a richer lather than control**
- Foam richness of negative control shampoo reduces as you add more water, whereas for Valida CR3, adding more water leads to a creamier foam

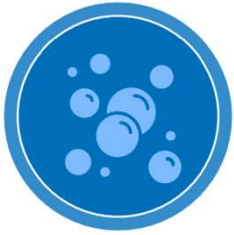
Appearance of shampoo:

- Valida CR3 provides slightly more opacity than control – to be expected.

Skin feel of shampoo:

- Control feels a little more drying than with Valida CR3

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