

Formula Name: Urea whole-body after shower slather on lotion

Date: 2021 - 03 - 13 Rev: 01

Enter Target Weight Below

Total Weight (g): 400.00

Phase	Ingredient	Percentage	Weight (g)	Notes
Water	Water	16.15%	64.60	This lotion is suitable for entire body use except eyes and lips and genitals (external use only)
	Propylene glycol	20.00%	80.00	Humectant, solvent, keratolytic, water-replacer
	Glycerin	3.00%	12.00	Humectant
	Xylitol	3.00%	12.00	Xylitol is highly toxic to dogs. Substitute 1:1 for Sorbitol if this is a concern (cats are fine)
	Xanthan gum	0.30%	1.20	Stabilizer and viscosity modifier
				0.00
Oil	Petrolatum	15.00%	60.00	Don't change this
	Mineral Oil	8.00%	32.00	Don't change this
	Shea Butter	3.00%	12.00	Shea will create grit if the end product is not cooled quickly and evenly enough - after emulsifying and shearing, place in bath of ice-water, then agitate every 5 mins
	Emulsifying wax NF	3.00%	12.00	It's what I had - change it if you like
				0.00
Active	Urea	10.00%	40.00	Over 10% urea maybe unstable and crystalize out
	Water	12.50%	50.00	Urea is 1g/1mL soluble in water at room temp
			0.00	
			0.00	
Buffer/pH modifier	Citric acid	0.16%	0.64	Target pH = 5.8 - 6.2 check pH at 10% dilution after cool-down
	Potassium citrate	0.64%	2.56	Sodium citrate can be subbed 1:1
	Water	5.00%	20.00	Create buffer solution separately then add at cool-down
			0.00	
Preservative	Germaben II	0.25%	1.00	Urea is naturally anti-microbial but a small amount of preservative is needed
			0.00	Germaben II is temp sensitive - add at cool down phase (<60C)
			0.00	
Total		100.00%	400.00	