

Certificate of Analysis

Product	POLYSORBATE 20
Lot #	J30426A21471
Shelf Life	2 years

Properties	Specifications	Results
General Appearance (@25 °C)	Yellow Liquid	Pass
Color Gardner Method	3.0 Max	1.0
Acid value	2.0 Max	1.0
pH (5% aqueous solution)	5.0 – 6.5	5.88
Moisture % (KF)	3.0 Max	2.80
Residue on Ignition %	0.25 Max	<0.25
Hydroxyl Value	96.0 -108.0	97.0
Saponification Value	40.0 – 50.0	45.0
1,4 Dioxane, ppm	10.0 Max	1.3
Heavy Metals, ppm	10.0 Max	<10.0
Arsenic, ppm	1.0 Max	Conforms
Myristic %	14.0 – 25.0	Conforms
Palmitic %	7.0 – 15.0	Conforms
Stearic %	11.0 Max	Conforms
Oleic %	11.0 Max	Conforms
Linoleic %	3.0 Max	Conforms
Peroxide Value	10.0 Max	1.5
Free Ethylene Oxide, ppm	1.0 Max	0.0
Identification	Passes test A&B	Pass
Caproic %	1.0 Max	Conforms
Capric %	10.0 Max	Conforms
Caprylic %	10.0 Max	Conforms
Lauric %	40.0 – 60.0	Conforms

This Certificate of Analysis was created by the manufacturer/distiller of the product. This information is believed to be up-to-date and correct; however, it is provided without any warranty. The customer is responsible for examining the product upon arrival and determining the safe use of the product in order to be in compliance with all applicable laws and regulations. The product must be stored in a cool, dry place away from direct light and heat, tightly sealed and away from children, the mentally infirm and pets. Essential oils shipped in amber plastic pharmaceutical grade bottles must be transferred to amber glass upon arrival, those shipped in aluminum bottles may be stored in such bottles for a minimum of 6 months, tightly sealed. All responsibility (including damage or injury) for the use of this and any other product purchased from Camden-Grey Essential Oils, Inc. rests with the purchaser/user. Camden-Grey's liability is limited to the paid value of this product.

Certificate of Analysis

Product	POLYSORBATE 20
Lot #	J9825D30447
Shelf Life	2 years

Properties	Specifications	Results
Appearance @ 25 Degrees C	Clear Liquid	Conforms
Acid Value	2.0 Maximum	1.2
Saponification Value	40.0 – 50.0	46.8
Hydroxyl Value	96.0 – 108.0	100.8
Moisture % (KF)	3.0 Maximum	2.6
Color (Gardner)	2.0 Maximum	1.1
Heavy metals, PPM	10.0 Maximum	0.4
Arsenic, PPM	1.0 Maximum	0.0
1.4 Dioxane, PPM	10.0 Maximum	1.8
Residue on Ignition % w/w	0.25 Maximum	0.15
Free EO, ppm	1.0 Maximum	0.7
pH (5% Solution)	5.0 – 6.5	6.1
C10 Capric, %	10.0 Maximum	5.2
C12 Lauric, %	40.0 – 60.0	52.0
C14 Myristic %	14.0 – 25.0	20.6
C16 Palmitic %	7.0 – 15.0	10.3
C18:1 Oleic %	11.0 Maximum	2.4
C18:2 Linoleic %	3.0 Maximum	0.0
C18:0 Stearic %	11.0 Maximum	3.3
C6 Caproic %	1.0 Maximum	0.5
C8 Capric %	10.0 Maximum	4.4
Oxyethylene Content %	70.0 – 74.0	70.2
Peroxide Value (meq/kg) @Time of Drumming	10.0 Maximum	2.4
Identification	Pass Test A&B	Conforms

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Certificate of Analysis

Product	POLYSORBATE 20
Lot #	J9824C01889
Shelf Life	2 years

Properties	Specifications	Results
Appearance @ 25 Degrees C	Clear Liquid	Conforms
Acid Value	2.0 Maximum	1.4
Saponification Value	40.0 – 50.0	47.8
Hydroxyl Value	96.0 – 108.0	102.1
Moisture % (KF)	3.0 Maximum	2.6
Color (Gardner)	2.0 Maximum	1.8
Heavy metals, PPM	10.0 Maximum	0.4
Arsenic, PPM	1.0 Maximum	0.0
1.4 Dioxane, PPM	10.0 Maximum	3.1
Residue on Ignition % w/w	0.25 Maximum	< 0.25
Free EO, ppm	1.0 Maximum	< 1.0
pH (5% Solution)	5.0 – 6.5	6.2
C10 Capric, %	10.0 Maximum	6.0
C12 Lauric, %	40.0 – 60.0	51.9
C14 Myristic %	14.0 – 25.0	19.8
C16 Palmitic %	7.0 – 15.0	11.1
C18:1 Oleic %	11.0 Maximum	3.4
C18:2 Linoleic %	3.0 Maximum	0.0
C18:0 Stearic %	11.0 Maximum	2.3
C6 Caproic %	1.0 Maximum	0.1
C8 Capric %	10.0 Maximum	5.2
Oxyethylene Content %	70.0 – 74.0	70.3
Peroxide Value (meq/kg) @Time of Drumming	10.0 Maximum	2.4
Identification	Pass Test A&B	Conforms

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