

Sodium Naphthalenesulfonate and Sodium Polynaphthalenesulfonate

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Abstract

The Expert Panel for Cosmetic Ingredient Safety reviewed newly available studies since their original assessment in 2003, along with updated information regarding product types and concentrations of use, and confirmed that Sodium Naphthalenesulfonate and Sodium Polynaphthalenesulfonate are safe as cosmetic ingredients in the practices of use and concentration as described in this report in formulations intended to be applied to the skin.

Keywords

Sodium Polynaphthalenesulfonate, Sodium Naphthalenesulfonate, Safety, Cosmetics

The Expert Panel for Cosmetic Ingredient Safety (Panel) first published a Final Report on the Safety Assessment of Sodium Naphthalenesulfonate and Sodium Polynaphthalenesulfonate in 2003.¹ The Panel concluded that these ingredients were “safe as used in cosmetic formulations intended to be applied to the skin. The available data, however, are insufficient to support the safety for use in cosmetic products which may contact mucous membranes or be ingested.” The Panel reviewed data published since the 2003 report^{2–5} and did not identify any additional issues of concern. The Panel also reviewed updated information regarding product types and ingredient use frequencies as reported in the US Food and Drug Administration (FDA) Voluntary Cosmetic Registration Program (VCRP) database,⁶ and the maximum use concentrations provided by the Personal Care Products Council (Council).⁷ The Panel determined to not reopen this safety assessment and reaffirmed the original conclusion that Sodium Naphthalenesulfonate and Sodium Polynaphthalenesulfonate are safe in cosmetics in the present practices of use and concentration in formulations intended to be applied to the skin. The Panel also determined that the available data remain insufficient to support the safety for use in cosmetic products which may contact mucous membranes or be ingested.

The frequency of use for Sodium Polynaphthalenesulfonate has decreased since the original review was considered, as seen in Table 1. According to VCRP data, Sodium Polynaphthalenesulfonate was reported to be used in 50

formulations in 1998.¹ In 2019, VCRP data indicate that Sodium Polynaphthalenesulfonate is used in 12 formulations.⁶ The current maximum concentration of use in leave-on products (.1%) is slightly lower than that reported in 1999 (.3%).^{1,7} While no uses were reported by the VCRP in products that may be used on mucous membranes or may be incidentally ingested, a concentration of use was reported in products that may come into contact with mucous membranes (bath soaps and detergents at .0074%).^{6,7} Uses were neither reported for Sodium Naphthalenesulfonate in the 2003 report nor are there uses reported in 2019.^{1,6,7}

Author’s Note

Unpublished sources cited in this report are available from the Director, Cosmetic Ingredient Review, 1620 L Street, NW, Suite 1200, Washington, DC 20036, USA.

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Table 1. Current and Historical Frequency and Concentration of Use for Sodium Polynaphthalenesulfonate According to Duration and Exposure.

	# of Uses		Max Conc of Use (%)	
	2019 ⁶	1998 ¹	2019 ⁷	1999 ¹
Totals^a	12	50	.000051-.19	.1-0.3
Duration of use				
Leave-on	11	50	.036-0.1	.1-0.3
Rinse-off	1	NR	.000051-.19	NR
Diluted for (bath) use	NR	NR	NR	NR
Exposure type				
Eye area	2	12	NR	.1-0.3
Incidental ingestion	NR	1	NR	NR
Incidental inhalation-spray	NR	1 ^b	.036; 0.1 ^b	NR
Incidental inhalation-powder	NR	NR	NR	NR
Dermal contact	9	41	.0074-.027	.1-0.3
Deodorant (underarm)	NR	NR	NR	NR
Hair – non-coloring	2	NR	.008-0.1	NR
Hair-coloring	NR	NR	.000051-.19	NR
Nail	NR	NR	NR	NR
Mucous membrane	NR	1	.0074	NR
Baby products	NR	NR	NR	NR

^aBecause this ingredient may be used in cosmetics with multiple exposure types, the sum of all exposure types may not equal the sum of total uses.

^bIt is possible these products are sprays, but it is not specified whether the reported uses are sprays.

NR, not reported.

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