

# Aluminum Starch Octenylsuccinate

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## Abstract

The Expert Panel for Cosmetic Ingredient Safety reviewed newly available studies since their original assessment in 2002, along with updated information regarding product types and concentrations of use, and confirmed that Aluminum Starch Octenylsuccinate is safe as a cosmetic ingredient in the practices of use and concentration as described in this report.

## Keywords

Cosmetics, Safety, Aluminum Starch Octenylsuccinate

The Expert Panel for Cosmetic Ingredient Safety published a Final Report on the Safety Assessment of Aluminum Starch Octenylsuccinate in 2002.<sup>1</sup> The Expert Panel reviewed updated information regarding product types and ingredient use frequencies provided by the US Food and Drug Administration (FDA) and maximum use concentrations provided by the Personal Care Products Council. Based on the available data, the Expert Panel decided not to re-open the document and proposed that the previous conclusion of safe as used in cosmetic formulations as given in Table 1, provided that established limitations imposed on heavy metal concentrations are not exceeded.

Concentration and frequency of use have increased since the original report was issued. In the original safety assessment, concentration of use data (1998/1999) indicated that Aluminum Starch Octenylsuccinate was used at up to 30% in leave-on products.<sup>1</sup> According to FDA frequency of use data received in 2018, Aluminum Starch Octenylsuccinate is reported to be used in 786 formulations (744 leave-on formulations and 42 rinse-off formulations).<sup>2</sup> The results of the concentration of use survey conducted by the Council in 2018 indicate Aluminum Starch Octenylsuccinate is used at up to 26% in products that are possible spray or powder and up to 30% in dermal contact.<sup>3</sup>

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## Author's Note

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**Table 1.** Current (2018) and Historical (1998) Frequency and Concentration of Use to Duration and Exposure.

	# of Uses		Max Conc of Use (%)	
	Aluminum Starch Octenylsuccinate			
	2018 <sup>2</sup>	1998 <sup>1</sup>	2018 <sup>3</sup>	1998/1999 <sup>1</sup>
Totals*	786	172	30	30
Leave-on	744	158	0.087-30	0.5-30
Rinse-off	42	12	6.7	1-6
Diluted for (Bath) use	NR	2	NR	NR
Eye area	138	11	3-15.3	0.5-30
Incidental ingestion	32	9	7.4-12.9	15
Incidental inhalation-spray	14; 122 <sup>a</sup> ; 115 <sup>b</sup>	3; 13 <sup>a</sup> ; 17 <sup>b</sup>	1.3-22.9; 2.5 <sup>a</sup> ; 26 <sup>b</sup>	2; 1-5 <sup>a</sup> ; 0.5-10 <sup>b</sup>
Incidental inhalation-powder	71; 115 <sup>b</sup> ; 1 <sup>c</sup>	55; 17 <sup>b</sup>	15-30; 26 <sup>b</sup>	1-15; 0.5-10 <sup>b</sup>
Dermal contact	699	159	0.087-30	0.5-30
Deodorant (underarm)	4 <sup>a</sup>	NR	NR	4 <sup>a</sup>
Hair – non-coloring	35	2	1.3-11.4	NR
Hair-coloring	13	NR	6.7	NR
Nail	NR	NR	NR	NR
Mucous membrane	34	18	7.4-12.9	15
Baby products	1	NR	NR	NR

\*Because each ingredient may be used in cosmetics with multiple exposure types, the sum of all exposure types may not equal the sum of total uses. NR, no reported use.

<sup>a</sup>It is possible these products are sprays, but it is not specified whether the reported uses are sprays.

<sup>b</sup>Not specified whether a spray or a powder, but it is possible the use can be as a spray or a powder; therefore, the information is captured in both categories.

<sup>c</sup>It is possible these products are powders, but it is not specified whether the reported uses are powders.