

# ALUMINIUM LAKES of COLOURING MATTERS

## GENERAL SPECIFICATIONS

*Prepared at the 63<sup>rd</sup> JECFA (2004) and published in the Combined Compendium of Food Additive Specifications, FAO JECFA Monographs 1 (2005). A PTWI of 2 mg/kg bw for aluminium was established at the 74<sup>th</sup> JECFA (2011).*

### DEFINITION

Aluminium lakes are prepared under aqueous conditions by reacting aluminium oxide with colouring matter complying with purity criteria set out in the appropriate specification monograph. Undried aluminium oxide is usually freshly prepared by reacting aluminium sulfate or aluminium chloride with sodium carbonate or sodium bicarbonate or aqueous ammonia. Following lake formation, the product is filtered, washed with water and dried. Unreacted aluminium oxide may also be present in the final product.

### Assay

Content of colouring matter shall be within the range specified by the vendor.

### CHARACTERISTICS

#### IDENTIFICATION

##### Solubility (Vol. 4)

Insoluble in water

##### Identification of colouring matter (Vol. 4)

Dissolve the sample using the method described in Colouring matter, Procedure for Lakes under Methods for Food Colours. Use the identification test described in the appropriate colour specifications monograph.

#### PURITY

##### Water-soluble chlorides and sulfates (Vol. 4)

Not more than 2 % calculated as sodium salts.  
Use the procedure for Water-soluble chlorides and sulfates in aluminium lakes under Methods for Food Colours

##### Hydrochloric acid-insoluble matters (Vol. 4)

Not more than 0.5 %  
Use the procedure for Hydrochloric acid-insoluble matters in lakes under Methods for Food Colours

##### Ether-extractable matter (Vol. 4)

Not more than 0.2 % (Method II)

##### Arsenic (Vol. 4)

Not more than 3 mg/kg (Method II)

##### Lead (Vol. 4)

Not more than 5 mg/kg  
Determine using an AAS/ICP-AES technique appropriate to the specified level. The selection of sample size and method of sample preparation may be based on the principles of the methods described in Volume 4 (under "General Methods, Metallic Impurities").

### METHOD OF ASSAY

See Colouring matter, Total content by spectrophotometry, Procedure for Lakes under Methods for Food Colours in Volume 4.