

**CERTIFICATE OF ANALYSIS**

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by Intertek. Certificate Number. 2317548

Catalogue Number	13902
Lot Number	A0481225
Description	p-Toluenesulfonic acid monohydrate,99%,extra pure
CAS Number	6192-52-5
Quality Test/Release Date	27/Feb/2026
Suggested retest date	27/Feb/2029
Country of Origin	INDIA
Declaration of Origin	synthetic
BSE/TSE	Not directly derived from or manufactured with any animal byproducts in any way (Including but not limited to fermentation or nutrient broth, catalysts, enzymes).

Result Name	Units	Specifications	Test Value
Appearance (Color)		White to off-white	Almost white
Appearance (Form)		Adhering crystals	Adhering crystals
Appearance		May discolor to pink on storage	May discolor to pink on storage
Infrared spectrum		Conforms	Conforms
Melting point		100°C to 108°C	101°C
Titration with CHA	%	>=98.5 (On dry substance)	99.07 (On dry substance)
Titration with CHA	%	=<0.5 Sulfuric acid	0.15 Sulfuric acid
Water	%	10.0 to 13.0 (KF)	10.61 (KF)
Titration Acid		The test method measures the total amount of	The test method measures the total amount of
Titration Acid		different isomers of	different isomers of
Titration Acid		Toluenesulfonic acid (TSA).	Toluenesulfonic acid (TSA).
Titration Acid		The para-isomer in TSA is min. 97%	The para-isomer in TSA is min. 97%

Geert Torfs  
Supervisor, QC

Products are processed under ISO 9001:2015 quality management systems and samples are tested for conformance to the noted specifications. Certain data may have been supplied by third parties. We disclaim the implied warranties of merchantability and fitness for a particular purpose, and the accuracy of third-party data or information associated with the product. Products are for research and development use only. Products are not for direct administration to humans or animals. It is the responsibility of the final formulator or end user to determine suitability, and to qualify and/or validate each product for its intended use.

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of the catalogue number listed above.