



Website: www.watson-int.com

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For Reagent:

ChemWhat

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CERTIFICATE OF ANALYSIS (COA)

PRODUCT NAME	Tungsten hexacarbonyl		
CAS NUMBER	14040-11-0	STANDARD	Enterprise Standard
BATCH NUMBER	WI23050304	QUANTITY	650kg
PRODUCTION DATE	2023.05.03	TEST DATE	2023.05.04
PACKAGING	Per request	RETEST DATE	2024.05.03

TEST ITEMS	SPECIFICATIONS	RESULTS
APPEARANCE	White crystalline powder	White crystalline powder
PURITY	99.99% min	Conform

ICP-OES ANALYSIS REPORT

ELEMENT	Na	Mg	Al	K
ASSAY (PPM)	6.48	4.15	7.77	<0.01
ELEMENT	Ca	Ti	V	W
ASSAY (PPM)	10.29	<0.01	<0.01	<0.01
ELEMENT	Fe	Co	Ni	Cu
ASSAY (PPM)	0.57	<0.01	<0.01	8.23
ELEMENT	Zn	As	Sr	Mo
ASSAY (PPM)	4.34	<0.01	<0.01	0.80
ELEMENT	Cd	Pb	Ba	
ASSAY (PPM)	<0.01	<0.01	<0.01	

PURITY CALCULATION



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Tungsten hexacarbonyl partially dissolves in mixed acids and cannot be directly determined by ICP for the tungsten content in the product. Therefore, impurities in tungsten hexacarbonyl are first dissolved out by mixed acids, and the impurity content in the pure tungsten hexacarbonyl is tested by ICP. The purity of tungsten hexacarbonyl is obtained using the impurity reduction method.

The theoretical content of tungsten in tungsten hexacarbonyl is

52.23% [183.8 (AW of tungsten) / 351.9 (MW of tungsten hexacarbonyl)]

Through ICP analysis, the total content of impurities in the pure tungsten hexacarbonyl is

0.004263 ppm [42.63 ppm]

The formula for calculating the purity of tungsten hexacarbonyl is:

$(\text{Theoretical content of tungsten} - \text{total content of impurities}) / \text{theoretical content of tungsten} \times 100\%$

Then the purity of tungsten hexacarbonyl is

99.99% [(52.23-0.004263)/52.23×100%].

STORAGE	Under room temperature away from light
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