



米克 (武汉) 生物科技有限公司

Mike(Wuhan) Biotechnology Co.,Ltd

## CERTIFICATE OF ANALYSIS

Product name	Spermine Tetrahydrochloride	<p>HCl HCl HCl HCl</p>	
Molecular formula	$C_{10}H_{26}N_4 \cdot 4HCl$		
Cas No.	306-67-2	Batch No.	MK-SPT-20220505
Quantity	30kg	MFG. date	2022.05.05
Test date	2022.05.09	Retest. date	2024.05.04

Testing Items	Specifications	Results
Appearance	White to off-white powder	Conforms
Identification	$^1H$ NMR confirms to structure	Conforms
Solubility	Soluble in water	Conforms
Loss on drying	$\leq 1.0\%$	0.48%
Residue on ignition	$\leq 0.2\%$	0.05%
Heavy metals	$\leq 10$ ppm	Conforms
Pb	$\leq 0.5$ ppm	Conforms
As	$\leq 0.15$ ppm	Conforms
Cd	$\leq 2.5$ ppm	Conforms
Hg	$\leq 1.5$ ppm	Conforms
Purity (GC)	$\geq 98.0\%$	99.03%
Conclusion	This product conforms to the specifications.	
Storage	Store in a well-closed and dry place with room temperature and no direct sun light.	

ANALYST:

检 1

CHECKER:

检 2

C.C. DIRECTOR:

