



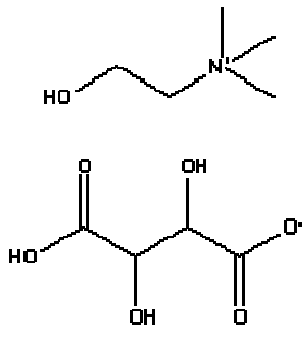
HANGZHOU DINGYAN CHEM CO.,LTD

TEL: 86-571-87157530,86465881,88025800, FAX:86-571-87156470

E-Mail:sales@dingyanchem.com,Web: www.dingyanchem.com

CERTIFICATE OF ANALYSIS

NO: DYC091804191

Product name	Choline Bitartrate
CAS Number	87-67-2
Molecule Structure	 <p>The image shows the chemical structure of Choline Bitartrate. It consists of a choline cation (N,N-dimethyl-2-(3-hydroxypropyl)ethanaminium) and a bitartrate anion (2,3,4,5-tetrahydroxypentanedioate).</p>
Molecule Formula	C9H19NO7
Batch number	20180419
Manufacture Date	2018-04-19
Testing date	2018-04-19

Items	Standard	Result
Appearance	White crystalline powder	White crystalline powder
Content	99% min	99.3%
Arsenic (As)	0.0003% max	<0.0001%
PH	3.0 ~ 4.0	3.5
Heavy metals(on Pb)	0.001% max	Passed
SiO2 Content	0.6%-1.2%	1%
Lead	0.001% max	passed
Residue on ignition (before adding SiO2)	0.1% max	0.07%
Choline content	40.9%-41.72%	41.02%
Moisture	0.5% max	0.35%
Melting point	142—147 Deg C	145 Deg C
Total plate count	500Cfu /g Max	<500 Cfu /g
Yeast & Mould	100 Cfu /g Max	<100 Cfu /g
Coliforms	10Cfu /g Max	<10 Cfu /g
1,4-Dioxane	10 ppm max	<10 ppm

ADD:RM 1118, NO.I BUILDING, BAIYUN TOWER, JIANGGAN AREA, HANGZHOU CITY, CHINA



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