

SECURE CHEMISTRY. SECURE SUPPLY. SECURE CONFIDENCE.



ANGUS is a leading global manufacturer of critical buffers for use in a variety of demanding pharmaceutical and biotechnology applications. With more than 50 years of manufacturing experience, we continue to invest in capacity and capabilities to deliver new buffer products and grades that meet the dynamic needs – as well as the regulatory and performance requirements – of the global markets we serve. All grades are GMO-free and BSE / TSE-free.

ANGUS BUFFER PRODUCT				PACKAGE SIZE AND GMID					PROPERTIES AND SPECIFICATIONS				
GRADE	MONOGRAPH	cGMP	ADDITIONAL MICROBIAL TESTING	1 kg	5 kg	12 kg	25 kg	50 kg	COUNTRY OF ORIGIN	CAS #	MOLECULAR WEIGHT (DALTON)	pH RANGE	MINIMUM PURITY (%)
Buffer Series													
TRIS AMINO™ Standard Buffer							273255		U.S.	77-86-1	121.14	10-11.5	99.3
TRIS AMINO™ Buffer ACS Grade	ACS			375893	375894	376359	146914		U.S.	77-86-1	121.14	10-11.5	99.8
TRIS AMINO™ AC Buffer							375981		Germany	77-86-1	121.14	10-11.5	99.9
Ultra Pure Series													
TRIS AMINO™ Ultra Pure	USP/EP	X		375546	154032	201109	288737	151698	U.S.	77-86-1	121.14	10-11.5	99.9
TRIS AMINO™ Ultra Pure	USP/EP/JPC	X	ET	376341	376342	11103466	279652	375624	U.S.	77-86-1	121.14	10-11.5	99.9
TRIS AMINO™ Ultra Pure ¹	USP/EP/JPC/ChP	X	ET, Sterility	376343	376344	375547	375548		U.S.	77-86-1	121.14	10-11.5	99.9
TRIS AMINO™ Ultra Pure Biologics Grade	USP/EP	X	ET, BB	376345	376346	375825	375824	375647	U.S.	77-86-1	121.14	10-11.5	99.9
TRIS AMINO™ Molecular Biology Grade	USP/EP	X	DN, RN, PR	375897	375898	376125	375845		U.S.	77-86-1	121.14	10-11.5	99.9
TRIS AMINO™ AC Ultra Pure	USP/EP	X		376348	376160	376158	375904		Germany	77-86-1	121.14	10-11.5	99.9
TRIS AMINO™ AC Ultra Pure	USP/EP/JPC	X	ET			376157	375905		Germany	77-86-1	121.14	10-11.5	99.9
TRIS AMINO™ AC Ultra Pure	USP/EP/JPC/ChP	X	ET, Sterility	376350	376351	376352	375906		Germany	77-86-1	121.14	10-11.5	99.9
TRIS AMINO™ AC Ultra Pure Biologics Grade	USP/EP	X	ET, BB		376127	376126	375907		Germany	77-86-1	121.14	10-11.5	99.9
TRIS Derivatives Series													
TRIS AMINO™ HCl				376353	376066	376067	376068		U.S.	1185-53-1	157.6	4.2-5.0	99.0
TRIS AMINO™ HCl Biologics Plus		X	ET, BB, DN, RN, PR, YM	376347	376070	376071	376072	376099	U.S.	1185-53-1	157.6	4.2-5.0	99.5
BIS-TRIS				376357	376355	376354	146820		Mexico	6976-37-0	209.24	5.8-7.2	99.0
BIS TRIS Biologics Grade			ET, BB	376358	376043	376042	376041		Mexico	6976-37-0	209.24	5.8-7.2	99.0
HEPES Buffer Series													
HEPES Biologics Plus			ET, BB, DN, RN PR, YM, TMC	376169	376170	376171	376172		U.S.	7365-45-9	238.3	6.8-8.2	99.5

¹TRIS AMINO™ Ultra Pure USP/EP/JPC/ChP grade product has an excipient registration number with the Chinese Center for Drug Evaluation (CDE). This registration number, F20190000165, can be utilized by customers in order to list ANGUS' TRIS AMINO™ product in their regulatory filings with the CDE for new drug products or substances.

Additional Testing Key: ET = Endotoxin BB = Bioburden DN = DNase
RN = RNase PR = Protease YM = Yeast and Mold TMC = Total Microbial Count

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