Stereospecific Detection Technologies
Reagents beyond the chemistry

SDT GmbH • Pascalstraße 17
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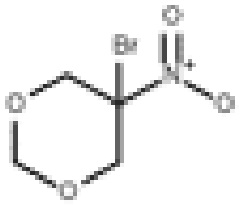
Product Specification and Description Sheet

Product name	5-Bromo-5-nitro-1,3-dioxane
Code	#**BND-D**
Purity (GC)	≥99,5%
Formula	$C_4H_6BrNO_4$
CAS#	30007-47-7
Molecular weight	212.0
Appearance	white to slightly yellowish dry free flowing crystalline powder
Melting point	58,3-61,1°C
Boiling point	210°C
Absorbance maximum (SP)	224,5 nm (solution in EtOH)
Solubility in water	0,5% in H_2O >18MΩ (at 29°C in 2 hours)
Rest H_2O (Karl Fischer titration)	≤0,5%
Storage stability	>>2 years at 15 – 25°C (in tightly closed glass or HD-PE/PP/PET)
Activity	very strong antimicrobial preservative highly effective against bacteria, yeast and fungi
Specific conc. effective in test with	
Gram-positive bacteria: Bacillus subtilis ATCC 6633, Streptococcus faecalis (clinical strain)	100 ppm (0,01%)



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Gram-negative bacteria: Esherichia coli ATCC 11229 (extremely resistant strain), Pseudomonas aeruginosa ATCC 14207, Enterobacter clocae ATCC 23355	300 ppm (0,03%)
Yeast/Fungi: Candida albicans ATCC 10231, Aspergillus niger ATCC 6275, Penicillium funiculosum ATCC 9644, Chaetomium globosum ATCC 6205 extremely resistant strain)	100 ppm (0,01%)
Suggested mechanism of action	presumably oxidizes thiol groups in vitally important microbial enzyme systems
Recommended concentrations	0,02-0,03% (simple salt buffers) – to - 0,05% (buffers containing low to moderate concentrations of proteins, sugars or detergents) – to - 0,1-0,12% (products containing high protein concentrations, liquid protein concentrates, ready-to-use IVD reagents)
pH	5,0-6,0 in pure water has no detectable influence on pH does not alter pH in buffers through 3,5-9,5
Applicable pH range	3,5 – 9,5
Compatibility and Interferences	compatible with most common liquid diagnostic formulations; does not interfere with antigen-antibody reactions, most enzyme assays, immunoassays, immunosensors, restriction enzymes, PCR, electrophoresis, nucleic acid and protein purification protocols.

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	interferes with cysteine and other free thiol reagents
Restrictions	not stable at temperatures >45°C slightly corrosive to metals strong reducing agents may lower biocide potential
Safety/Toxicity	harmless at recommended concentrations; not carcinogenic or mutagenic (Ames-test neg.)