Specification

## ABTS® *BioChemica* A1088

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| **Physical Description:** | Solid |
| **Product Code:** | A1088 |
| **Product Name:** | ABTS® *BioChemica* |
| **Headline Comment:** | ® registered trademark of Roche Diagnostics |
| **Specifications:** | TLC: passes test<br>E 0.001 %/1 cm, 340 nm: min. 38000<br>Solubility (2 %; $H_2O$): clear, green<br>Loss on drying: max. 6 % |
| **Hazard pictograms** |  |
| **WGK:** | 1 |
| **Storage:** | 2-8°C |
| **Signal Word:** | Attention |
| **GHS Symbols:** | GHS07 |
| **H Phrases:** | H315<br>H319<br>H335 |
| **P Phrases:** | P305+P351+P338 |
| **Molecular Formula:** | $C_{18}H_{24}N_6O_6S_4$ |
| **M:** | 548.69 g/mol |
| **CAS:** | 30931-67-0 |
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|---|---|
| **EINECS:** | 250-396-6 |
| **CS:** | 29339980 |

### Comment

At concentrations above 56 mM, ABTS is insoluble. Heating facilitates dissolution of ABTS, e. g. in 0.1 M phosphate buffer. If it crystallizes upon cooling (e. g. at concentrations of 1 mg/ml), the supernatant can be used. This behavior can be used to separate excess of ABTS (2). At concentrations below 0.002 mM, it may happen, that, depending on the peroxidase concentration, the substrate ABTS will be completely used up and measurements of enzyme activity will be carried out in the non-linear range. Absorption maxima of ABTS are found at 340 nm and 414 nm, respectively. Usually, measurements will be performed at 420 nm.Solutions of ABTS in 0.5 M phosphate-citrate buffer (pH 4.0) are stable for at least one month, if stored at \+4°C (5).

### Bibliography

(1)Childs, R.E. & Bardsley, W.G. (1975) *Biochem. J.* **145**, 93-103The steady-state kinetics of peroxidase with ABTS as chromogen. (2)Bruss, M.L. & Black, A.L. (1978) *Anal. Biochem.* **84**, 309-312Enzymatic micro determination of glycogen. (3)Gallati, H. (1979) *J. Clin. Chem. Clin. Biochem.* **17**, 1-7Horseradish peroxidase\: determination of the activity with $H_2O_2$ and ABTS. (4)Mäkinen, K.K. & Tenovuo, J. (1982) *Anal. Biochem.* **126**, 100-108Observations on the use of guaiacol and ABTS as Peroxidase substrates. (5)Szutowicz, A. *et al*. (1984) *Anal. Biochem.* **138**, 86-94Colorimetric determination of monoaminoxidase with ABTS and Peroxidase.

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