

## Product Information

### N<sub>α</sub>-Benzoyl-DL-arginine β-naphthylamide hydrochloride

Product Number **B 4750**

Storage Temperature 2-8 °C

#### Product Description

Molecular Formula: C<sub>23</sub>H<sub>25</sub>N<sub>5</sub>O<sub>2</sub> • HCl

Molecular Weight: 439.9

CAS Number: 913-04-2

Melting Point: 197-198 °C

Fluorescence Properties:

Excitation Wavelength = 335 nm<sup>1</sup>

Emission Wavelength = 410 nm<sup>1</sup>

Synonym: BANA

N<sub>α</sub>-Benzoyl-DL-β-naphthylamide hydrochloride is a chromogenic substrate for proteolytic enzymes such as trypsin, cathepsin B1, cathepsin H, and papain.<sup>1-7</sup> Hydrolysis of BANA at the bond between the arginine and the p-naphthylamine moieties releases the chromophore p-naphthylamine, which can be detected by colorimetric analysis. The use of BANA in assaying protease inhibitors from *Nicotiana attenuata* has been described.<sup>8</sup>

BANA is also utilized in periodontal research and studies of related bacteria. A comparison of the BANA assay with other methods in the analysis of periodontal infections related to *Porphyromonas gingivalis*, *Treponema denticola*, and *Bacteroides forsythus* has been published.<sup>9</sup> A plaque BANA hydrolysis assay has been used to probe the activity of *Porphyromonas gingivalis* and *Actinobacillus actinomycetemcomitans* in gingival vs. non-gingival samples.<sup>10</sup>

#### Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

#### Preparation Instructions

This product is soluble in dimethylformamide (50 mg/ml), with heat as needed, yielding a clear, colorless to faint yellow solution. It is also soluble in DMSO (50 mM).<sup>8</sup>

#### References

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