Application Sheet

io·li·tec
Ionic Liquids Technologies

Protein crystallisation

The crystallisation of enzymes and proteins is the most powerful tool for their structure determination by x-ray measurements. The results from these measurements enable a deeper insight in the activity and selectivity of enzymes or membrane-proteins, which are important factors in the field of biochemistry or relevant factors in the conception of new drugs in pharmaceutical industry.

In recent years only a few publications described the use of ionic liquids as crystallising agents. Their large potential as solvents and stabilizing agents for proteins is huge since the solvent properties can be tuned by molecular design. IoLiTec identified the large potential of ionic liquids for this purpose in 2004[1]. Very recently an HTS study of protein crystallisation in ionic liquids certified the utility of ionic liquids in protein crystallisation[2].

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IOLITEC offers a well-selected kit of high purity ionic liquids for protein crystallisation in two package sizes (10 g as part of MyKit and 25 g). All materials are of course also available in bulk quantities up to 100 kg.

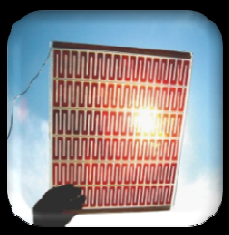
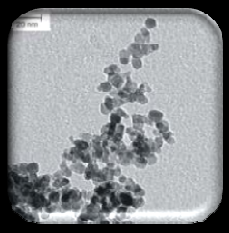
Product Code	Compound	Quantities
IL-Protein-Kit-25	Ionic liquids kit consisting of 10x 25 g of the ionic liquids listed below	10x 25 g

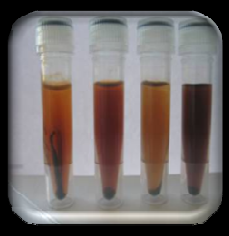
Ionic Liquids from the protein crystallisation kit:

Triethylsulfonium bis(trifluoromethylsulfonyl)imide, 99%
1-Butyl-3-methyl-pyrrolidinium bis(trifluoromethylsulfonyl)imide, 99%
1-Butyl-3-methyl-imidazolium dicyanamide, 98%
Triisobutylmethylphosphonium tosylate, 98%
1-Ethyl-3-methyl-imidazolium trifluoromethanesulfonate, 99%
N-Butyl-N-trimethylammonium bis(trifluoromethylsulfonyl)imide, 99%
Cholin dihydrogenphosphate, 99%,
Ethanolammonium formate, 98%
Ethylammonium nitrate, 98%
1-Ethyl-3-methyl-imidazolium ethylsulfate, 99%

References

[1] A. Bösmann, T.J. Schubert, DE102004027196 .
[2] M. L. Pusey, M. S. Paley, M. B. Turner, R. D. Rogers, Crystal Growth & Design 2007, 7, 787-793.
[3] D. R. MacFarlane et.al., Chem. Comm. 2005, 4804-4806.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