

## SALTS & CO-CRYSTALS

## CRYSFORMA offers systematic salt & co-crystal screening studies to discover and select the salt derivative or co-crystal of an API with optimal solid state properties.

**Salts:** Preparation of a salt is the classical strategy to optimize the solid state properties of an active pharmaceutical ingredient. Salt derivatives can improve crystallinity, solubility and stability of a pharmaceutical compound, and are often chosen instead of the free acid or base.

• **Pharmaceutical co-crystals:** In recent years, the development of a pharmaceutical co-crystal has become a novel strategy to improve the solid state properties of an API. Co-crystals are an alternative to salts when these do not have the appropriate solid state properties or cannot be formed due to the absence of ionizable sites in the API.

## TYPE OF STUDIES

- Salt and co-crystal screening of pharmaceutical ingredients with selected counterions or co-crystal formers.
- Characterization of crystalline salts and pharmaceutical co-crystals.
- Development of reliable preparation procedures.
- Scale-up of the selected salt or pharmaceutical co-crystal.
- Polymorphism study of the selected salt or co-crystal.
- Resolution of chiral compounds through selective diastereomeric salt crystallization.

## METHODOLOGY

The unit has developed its own salt and co-crystal screening methodology based in the use of selected crystallization procedures in an optimized group of crystallization solvents. The methodology allows performing 1000 crystallization experiments from 10 g of starting API under controlled conditions. We use small scale high throughput crystallization systems controlled by highly skilled scientists to maximise the information drawn from each experiment.





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