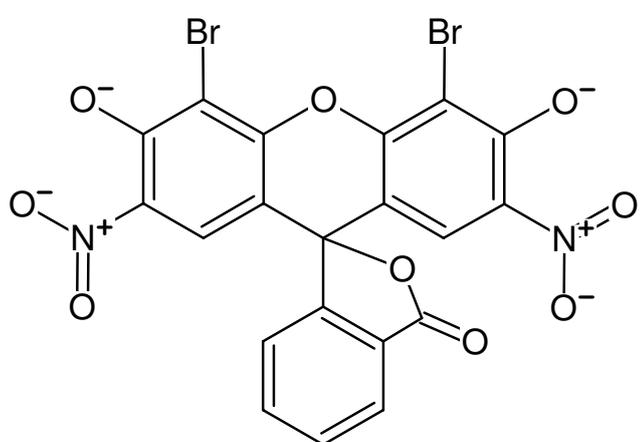


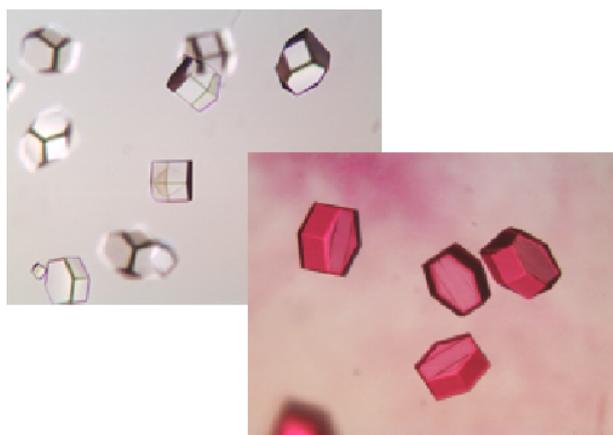
**JBS Bright Red**

Eosin Scarlet

Cat. No.	Amount
CO-304	300 µl

Na<sup>+</sup>Na<sup>+</sup>

Structural formula of JBS Bright Red



Unstained (A) and stained (B) protein crystals

**For general laboratory use.****Shipping:** shipped at ambient temperature**Storage Conditions:** store at ambient temperature**Shelf Life:** 12 months**Molecular Formula:** C<sub>20</sub>H<sub>6</sub>Br<sub>2</sub>N<sub>2</sub>Na<sub>2</sub>O<sub>9</sub>**Molecular Weight:** 624.08 g/mol**CAS#:** 548-24-3**EC number:** 208-943-1**Applications:**

JBS Bright Red is a crystal dye used to stain macromolecular crystals, i.e. protein, peptide and nucleic acid crystals in order to differentiate them from small molecules and salt crystals.

**Description:**

Crystallization screening with high concentrations of precipitant and salt may lead to the formation of salt crystals. It is quite difficult to make a distinction between these false positives and true protein crystals.

Staining of crystals with appropriate dyes is a very straightforward method to differentiate between macromolecular crystals and salt crystals [1].

Protein and salt crystals differ substantially in their solvent content. Small crystal dyes, like JBS Bright Red, are able to permeate the solvent channels of a protein, thus coloring the protein red. In contrast, salt crystals are tightly packed and do not possess large solvent channels. They will therefore remain colourless.

**Usage:**

Simply add 0.5-1 µl of JBS Bright Red to the crystallization drop containing the crystals of interest.

**Coloring Time:**

JBS Bright Red colors protein crystals after a few minutes. Even if the color of the solution is only faintly red under the microscope, proteins will be stained within 5-15 min.

Very occasionally, it has been reported that protein crystals did not absorb crystal dyes [2].

**Selected References:**

- [1] Wilkosz *et al.* (1995) Preliminary characterization of EcoRI-DNA co-crystals: incomplete factorial design of oligonucleotide sequences. *Acta Cryst. D* **51**:938.  
 [2] Eckert *et al.* (2003) Crystallization and preliminary X-ray analysis of Alicyclobacillus acidocaldarius endoglucanase CelA. *Acta Cryst. D* **59**:139.