Concentration matrices –
A procedure for determining optimal concentrations in biocrystallization

The biocrystallization method, also termed the $CuCl_2$ crystallization method, is based on the ability of dihydrate $CuCl_2$ to reflect and discriminate qualitative properties of biological samples in morphological features, or "pictures". This ability presupposes an initial determination of "optimal" concentrations of $CuCl_2$ and the sample in question. Here Selawry (1961) and Engqvist (1970) recommend so-called concentration series, whereby increasing amounts of the sample in question is added to a fixed amount of $CuCl_2$ (0.20g per picture). At a given concentration of sample pictures will be generated which show a number of morphological features which are sample-specific, and known to be able to discriminate various samples. This optimal concentration is then applied for all investigations, in order to be able to compare samples. According to the authors experience, in addition to this "middle" concentration, most researchers also apply a "lower" and a "higher" concentration, because these complement the information obtained from the middle, optimal concentration.

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