

## **Abstract**

The evaluation of this research is efflorescence deterioration on the layer of chalk, which was a case study on Bekhradi's historical house. Usually white clay has been used for decorating the architectural designs in the houses of Qajar time period, although we can inform that there was no evidence or any researches showing that salt solution were damaging or destroying white clay layers; different parts of this layer have been analyzed under chemical test, that carbonates and organic material like Catira and Paste have been confirmed, after that from white clay and efflorescence XRD analysis has been done, the result of that damage was magnesium sulfate salt. After that aging test was taken because of differences in the shape of efflorescences, atomic absorption test has been done from historical samples. As per the results high quantity of magnesium sulfate salt and having high environmental humidity, cause the dissolving of salt and by reducing of that humidity comes through the surface and makes crystallization, so with repetition of that action the differences of efflorescence justified with aging samples, so the confronting solutions have been taken on the damages by insulating the areas and chalk, we stop the humidification entrance to that parts.

**Key words:** Pathology, deterioration, decoration, Efflorescence, Salt crystallization, the Bekhradi's house, Haj Rasoliha