

# RECOVERING GLASS AND METALS FROM GLASS DEPOSITS

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## **Abstract**

Kingdom of glass is located in Småland and it has a long history of glass making. Glass factories has come and gone leaving a large amount of glass deposits in this region. Full lead crystal contains 30 weight% lead. We have developed a technique to separate out lead from deposited lead glass. The result is a metal fraction containing lead and a glass fraction that can be modified for future use.

The technique has been developed in a scale of 0.2 dm<sup>3</sup> with very promising results. The lead content in the glass can be reduced from 30% to 0.1 weight%! It is not only the majority of the lead is transferred to the metal phase, but also arsenic and antimony. Equipment has been installed to increase the processed volume to 6 dm<sup>3</sup> and thus the technique will be verified in a larger scale.

The technique will work as long as there is enough lead to create a metal phase. This sets a demand of sorting out glass and ensuring a certain amount of lead. It is rarely only glass that has been dumped so limits for how much non-glass materials that can be tolerated in the process are necessary. An experimental design for determining an estimate of the possible levels of soli, sand and peat has been initiated.

This is a new possibility of recovering metals and glass from excavation sites. A necessary continuation is an industrial scale test and identification of a suitable glass product before the technique will be reality.