## Ceramic Evidence for Sugar Production in the 'Akko Plain: Typology and Provenance Studies

Anastasia Shapiro\*, Edna J. Stern\*, Nimrod Getzov\*\*, Yona Waksman\*\*\*

Current paper summarises the results of typo-chronological, petrographical and chemical studies of the ceramic vessels associated with sugar production (sugar molds and molasses jars) from the archaeological sites excavated and surveyed within the 'Akko Plain. The sites, dated between 11<sup>th</sup> and 17<sup>th</sup> centuries, provide wide repertoire of the vessels which covers the whole time-scale from Fatimid, Frankish to Ottoman rules. The provided research sheds a light on the dynamics of the sugar molds modification. During the Frankish rule, when the government was settled in 'Akko, the manufacturing centres were concentrated in the coastal area, and the molds were mass-produced, probably with the active participation of the government. In later times, Mamluk and Ottoman, the sugar molds manufacture was moved inland, which correlates with the movement of the seat of government to Safed.

<sup>\*</sup> Israel Antiquities Authority, Northern district, P.O.B. 35, Nahalal 10600, Israel.

<sup>\*\*</sup> Israel Antiquities Authority, Khan ash-Shawrda, P.O.B. 1094, 'Akko 24110, Israel.

<sup>\*\*\*</sup> Centre National de la Recherche Scientifique, UMR 5138 « Archéométrie et Archéologie », Maison de l'Orient et de la Méditerranée, 7 rue Raulin, 69365 Lyon cedex 7, France.