

PRE-CLEANING IDENTIFICATION OF MUSKETS FROM AKKO 1 SHIPWRECK BY NDT AND DT METHODS

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Akko (Acre) is a historic walled port city in northern Israel. During the late Ottoman period Akko had a key role in important maritime events that took place in the Eastern Mediterranean, specifically between the mid-18th and the mid-19th century.

The Akko 1 shipwreck was excavated by an expedition of the Recanati Institute for Maritime Studies at the University of Haifa, and the Nautical Archaeology Society of Great Britain, with the co-operation of the Israel Antiquities Authority and the Israel Nautical College.

The shipwreck was found in four metres of water inside the ancient harbour of Akko, 250 m from the ancient wall, with its stern touching a submerged rampart. The dense framing pattern and relatively thin planking, the extensive use of oak and the origin of the timber—NW Turkey, suggest that the Akko 1 shipwreck is the remains of a small armed ship or an auxiliary vessel built in the Eastern Mediterranean. The ship has been provisionally dated to the end of the 18th or the beginning of the 19th century. The finds testify to its having been involved in one of the naval campaigns at Akko.

Several muskets, covered with marine encrustation, were found at the after part of the wreck. Prior to cleaning it was X-rayed, and found to have been flintlock. Preliminary examination of the X-ray suggested it was probably of the British Sea Service type from the end of the 18th or the early 19th century. The X-ray enabled removing the concretion carefully, knowing the inner—hidden section, and thus confirming the suggested type and origin of the musket.