

To Article II (1983: “Alun du Kawar”)

More detailed studies of the alum of Kawar confirmed that pure alum is found in that oasis. The chemical composition of another four samples of alum from the site north of Bilma largely confirms the data of the analysis of 1977 (1982: 23 n. 14). Further alum deposits are likely to have existed in northern Kawar in the form of numerous *Quellhügel* (source-hills). But owing to the continuous action of sand the original composition of the minerals is no longer detectable. The analysis of mineral samples from the north of Kawar, likewise termed *kəlvu sheb*, revealed that they were actually natron (1991c: 228-229). With respect to the economical significance of alum exports from Kawar during the time of the Crusades, Cahen points out that alum from Kawar was an article of trade which the Egyptian authorities supplied to the Christian merchants on a contractual basis. In exchange for this and other articles, Saladin obtained wood for his fleet and weapons to use against the crusaders.⁸