

# COMPARATIVE STUDY ON BLUE PIGMENT OF CHINESE BLUE AND WHITE PORCELAIN AND ISLAMIC GLAZED POTTERY 12<sup>TH</sup>-17<sup>TH</sup> CENTURY

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Blue-and-white porcelain constitutes the largest amount porcelain exported in *Chinese* history. However, at least in the early phase it was Islamic glazed pottery that manifestly influenced the figuration, decoration and even the size of Chinese blue-and-white porcelain, to the extent that Chinese potters used Arabic calligraphy as decoration for porcelain. The laboratory tests on large samples of Chinese blue-and-white porcelain produced in the Yuan and Ming dynasties (AD 1271 – 1644) was taken and the results revealed that the blue pigment underwent a major shift around 1425 AD. The chemical composition of blue pigment used before 1425 didn't match any mineral produced in China. From this the inference can be drawn that foreign pigment was imported during the early period of blue-and-white porcelain production, most probably from Turkey or Iran, since the technique of painted blue pigment decoration was first developed in early Islamic ceramics. All of these indicate that the emergence of blue-and-white porcelain had a very close relationship with Islamic ceramics which had already reached the high level of development by the middle ages.

Around 30 pieces of Islamic glazed potteries which produced in Syria, Iran and Egypt in 12<sup>th</sup> – 16<sup>th</sup> century were studied. The result of chemical composition shows these samples could be divided into 4 groups. 2 of them show high copper in blue pigment. The copper probably is the one of mainly coloured element lead to blue which is great different with contemporaneous Chinese Blue and White porcelain which nearly no copper in pigment and the blue colour mainly due to Cobalt and Iron. However, one group show quite similar chemical composition with blue pigment used in China before A.D 1425. It indicates that the assumption of China imported blue pigment from mid-east in early stage is reasonable and compellent. On the other hand, the diversity of blue pigment used on Islamic ceramics reveals there were several ceramics-making systems existed in mid-east at that period and probably different area used different pigments.