GEORGE MARTINE, M.D., F.R.S. (1700–1741)  
AN EARLY THERMAL ANALYST?

R. C. Mackenzie

DEPARTMENT OF CHEMISTRY, UNIVERSITY OF ABERDEEN, MESTON BUILDING, OLD ABERDEEN AB9 2UE, SCOTLAND

(Received June 22, 1989)

A study of the life and work of George Martine, who seems to have been the first to have used the principle of differential thermal analysis, reveals that his stature scientifically (and perhaps medically) has not as yet been fully appreciated. A complete bibliography of his writings is appended.

The value of the thermometric studies of George Martine was early recognized internationally [e.g. 1] and indeed his work on heating and cooling was the basis on which Joseph Black founded his concept of heat capacity [2]. As it has recently been suggested that Martine was the first to make use in his experiments of the principle of differential thermal analysis (DTA) [3], an account of his life and work on heat may be of interest to thermal analysts.

The Martine family

To appreciate the outlook and character of George Martine, it is necessary to know something about his forebears. In fact, he came of a family that had a long and influential connection with the town and University of St. Andrews, Scotland, as well as with the Church. His ancestry can be traced back to John Martine, who was Dean of Guild of St. Andrews in the mid-sixteenth century, and his wife Margaret Ramsay [4]. Their son, James Martine, D.D., (1543–1620) was Dean of the Faculty of Arts at the University in 1575–1578 and 1582–1587 [5] and “Provost” (Principal) of St. Salvator’s College there from 1577 to 1620 [5, 6]. Association with the University may, however, go back much further, as a “George Martyn” (a
common earlier spelling) became a “Licentiate” (graduate) in 1492—and, as will be seen below, “George” and “James” were frequently recurring names in family history. Be that as it may, James, while Provost, saw to the repair of neglected buildings at the College and, in 1609, had the great bell of the College recast; his name is still inscribed thereon. At this time, and possibly for some time before, the house of the Martine family was close to the College.

James left no issue but, on his death, he was succeeded as Provost by his nephew George Martine, D.D., grandson of John, who served until his death in 1646. One of the sons of this George and his wife, Catherine Schvez, was another James (1614–1684), a parish minister who owned “seven aikers of St. Andrews which belonged to the priorie there”, presumably acquired by the family on the earlier dissolution of the monasteries. This was the estate of Claremont, which he passed on to his son, another George (1635–1712), who was Commissary Clerk (a clerical post) of St. Andrews from 1666 to 1690, when he was deprived of it for “not taking the assurance to King William and Queen Mary”. As amanuensis to Archbishop James Sharp (1613–1679), this George kept meticulous notes of the Archbishop’s household expenses and wrote a fascinating account of the St. Andrews of his time in 1683 and a history of St. Rule’s Chapel, neither of which were published until about 100 years later.

George Martine, M.D

According to the Dictionary of National Biography and to biographies based thereon, the George in whom we are interested was the son of the last-named George. But, according to records at the University of St. Andrews, he was in fact the son of James Martine of Claremont and his wife Margaret McGill and was thus the grandson and not the son of George. His birthdate is universally given as 1702, but this also seems to be in error, as, (a) on matriculation as a student at Leyden in November 1721 he gave his age as 21 and (b) in a short biographical note in the Preface to a posthumous book of Martine’s, Alexander Monro, primus, Professor of Anatomy at the University of Edinburgh, states that he died (early in 1741) “anno aetatis 41” (Appendix, I). Both these facts suggest a birth date in 1700—which is also consistent with his matriculation as a student at the University of St. Andrews in session 1713/14, as 13 was then a common age for university entrance.

While at University, he was involved in an incident connected with the 1715 Jacobite uprising in Scotland. On the day that the “Old Pretender” was proclaimed King at St. Andrews, he was one of a party of students that rang the College bell of St. Salvator’s after two of his fellow-students had “held a pistol to the porter’s wives.