Chapter 1

Alchemy in Denmark

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Only scant evidence exists of alchemy being practised or even known in medieval Denmark. Archbishop Jens Grand (d. 1327) owned a book on alchemy, and archaeological findings support indications that one or two of the bishops of Aarhus were engaged in alchemical experiments in the fifteenth century. Given the costs of the substances and equipment needed, the art of alchemy is generally best documented within the upper strata of society, and sources suggest that, beginning with King Christian II (1481–1559, r. 1513–1523), alchemy was over the following two centuries mainly a royal pursuit. The female advisor to Christian II, Sigbrit Villoms, was rumoured to be an adept in alchemy. Both King Christian III (1503–1559, r. 1534–1559) and his son and successor Frederik II (1534–1588, r. 1559–1588) were intrigued by the possibilities of alchemy, especially with regards to its importance in regard to the production of chemically-prepared medicine.

Tycho Brahe’s Laboratory

King Frederik II funded Tycho Brahe’s (1546–1601) research into astronomy (which at the time included astrology) and alchemy, and Tycho supplied the court with his chemical remedies. Tycho, as far as we know, did not try to transmute metals into gold, but equated alchemical investigations with chemical experiments and he held minerals, metals, and chemical substances to be analogous to the celestial bodies and containing the same power to influence the microcosm of the body as the stars exerted on the macrocosm. For this reason, Tycho labelled alchemy “terrestrial astronomy”. Tycho professed to have been as much occupied by alchemy as astronomy throughout his career, but while he published his astronomical observations, he kept in line with the tradition of secrecy in alchemy and refused to disclose his findings, claiming that it was not given to everybody to treat such great mysteries properly and honestly.

In the basement of his Uraniborg castle on the Island of Hven, Tycho had a laboratory built, by his own description containing sixteen different furnaces for chemical use, viz. three bath-heaters, a digesting furnace with ashes, four large athanors (used for constant heating) and two small ones, two distillation furnaces with sand or ashes, one for a large bellows, connected to the furnace...
by means of two pipes, another furnace placed apart, with lamps, two furnaces reflecting the heat, one directly, the other in a spiral, partly placed freely, partly in a closed chamber. Many individuals in the circle around Tycho Brahe were also pursuing alchemy, whether for reasons of health or wealth. The most notable among these were his sister Sophie Brahe (1556–1643), who personally conducted iatrochemical experiments (i.e., combining alchemy with medicine), and her second husband, the nobleman Erik Lange. He squandered vast sums trying to transmute base metals into gold and finally fled the country in order to avoid being imprisoned for debt. Lange died in exile in 1613, perhaps in Prague while staying with relatives of Tycho Brahe.

Paracelsian Chemistry and Medicine

In 1555, the bishop of Sealand, Peder Palladius (1503–1560), referred to alchemy as an integral part of medicine, but accused those who professed to be able to make gold of being imposters. Palladius' connection of alchemy with medicine squared well with the university curriculum where pharmaceutical alchemy was plainly accepted. Caspar Bartholin the Elder, professor of medicine at the University of Copenhagen 1613–1624, taught his students both Galenic humoralism and the spagyric art of Paracelsus, but the quest for gold by way of transmutation was as a rule left out. Occasionally, the Academic Senate at the University of Copenhagen was called upon to act as court in matters involving alchemy. In 1595 the professor of Latin, Hans Rasmussen Skomager (Johannes Erasmi Hafniensis), was summoned before the Senate by a German alchemist, Casper Kröger, with whom he had collaborated. Disagreements between them prompted the alchemist to accuse the professor of having stolen his secrets contained in a handwritten manuscript with the title *De confiendo sigillo Salomonis*. Professor Skomager vehemently denied the charge and even hit his accuser in the face in front of the judges, forcing the Senate to reprimand the professor for such un-academic behaviour. The fact that the professor had been dealing with the alchemist in the first place was, however, not a matter of concern to the Senate. In 1700, the Copenhagen physician Christian Hacqvart appeared in a case brought before the Senate by the coppersmith Henrik Ehm. Hacqvart had promised to pay Ehm 600 thalers for a method to make gold from silver, but as the method turned out to be quite worthless, Hacqvart refused to pay and the Senate supported his stance.

Since alchemy in connection with Paracelsian chemistry and medicine was commonplace in late sixteenth and seventeenth century Denmark, Paracelsian remedies were fully incorporated in the official pharmaceutical tariff of 1619.