

VAN HELMONT, Jan-Baptist

Born: Brussels, 1577 (1579?)

Died: Vilvoorde, 1644

At the University of Leuven, Van Helmont tries his luck at a number of disciplines, without however obtaining any degree. In the end he graduates as a doctor of medicine (1599) and travels all over Europe. During a stopover in Brussels he is infected with scabies which the traditional methods of Galenus cannot cure but an ointment containing sulphur and mercury does the job. This kindles his interest for the teachings of Paracelsus and he publishes a number of books on iatrochemistry and animal magnetism. His writings run counter to Galenus' theories of long standing, leading to Van Helmonts reprimand by the Inquisition. If on the one hand he believes in the necessity of and promotes hygiene, he supports the belief in spontaneous generation. His famous experiment in which he introduces the use of the balance as a measuring instrument is about a tree which he scrupulously weighs, waters for five years and observes that its weight has doubled but not the mass of the earth, from which he deduces that the water is "transformed" into wood (The theory of photosynthesis is about one century more recent). Van Helmont discusses different kinds of what he calls "air" (NO_2 , SO_2 , CO_2 , ...) calling them "gas", from the Greek *chaos*. He discovers that one and the same gas "*spiritus silvestre*" (a.k.a. CO_2) is formed by the burning of charcoal, by the effect of acetic acid on marble and is the result of the alcoholic fermentation. Van Helmont believes in the realization of the alchemist's dream of turning mercury into gold, which does not keep him from having made a number of valuable (bio)chemical discoveries through critical observation.