CHAPTER 8

HIRCIC ACID

453. The amount of hircic acid that I was able to examine was so small that my experiments are very limited. The properties that I found for this acid are the following:

454. In the 'free' state, the acid is colorless and at 0°C it is still liquid; it is lighter than water; it smells like acetic acid and billy goat; it is volatile.

It is hardly soluble in water.

It is highly soluble in alcohol.

It strongly reddens litmus.

Potassium hirciate[1] is deliquescent.

Barium hirciate is not very soluble in water.

Ammonium hirciate has a stronger billy goat odor than the acid.

I performed just one experiment to determine the relative molecular mass of hircic acid and used such a small amount of material that I would not have published the result of my experiment if it had been easy to obtain a few grams of this acid.

An amount of 15 mg of dry barium hirciate was dissolved in nitric acid without effervescence. The barium nitrate gave 10 mg of sulfate[2] which represents 6.563 mg of base; thus

Hircic acid anhydride…..	100
Barium oxide……	77.79, containing 8.129 oxygen

[1] This is the name the author introduced. In analogy with acetates having been derived from acetic acid and palmitates from palmitic acid, hircate would have been more logical than hirciate. However, the c in hircate would be pronounced as a k and in order to maintain the s sound in hircic acid, an i has been inserted between the c and the a.

[2] The anhydride will have a relative molecular mass of (100 : 77.79) x (137.3 + 16) = 197.5 so that the free acid has a relative molecular mass of (197.5 + 18) :2 = 107.7, which is even less than caproic acid (116.2).

Consulting subsequent literature via Google reveals that the word 'hircic' derives from the Latin word *hircus* meaning billy goat. Authors like Louis-Jacques Thenard (1827), Jean-Baptiste Dumas (1835), François-Vincent Raspail (1838), François Verdeil and Charles-Philippe Robin (1853), Jöns Jakob Berzelius and Antoine Jacques Louis Jourdan (1833) just quote Chevreul. Only Victor Regnault (1854) adds: "The composition is not known." It still isn't.