

## CHAPTER 15

PHOCENIN<sup>1</sup>

## § 1. PHYSICAL PROPERTIES

576. At 17°C, it is quite fluid. It has a density of 0.954 (g/mL). It exudes a very light odor that escapes definition but an experienced nose can detect something ethereal and a trace of isovaleric acid.

## § 2. CHEMICAL PROPERTIES

577. It is neutral with respect to colored reagents.

578. Alcohol dissolves it in large amounts when boiling. When a very dilute solution is distilled off, it leaves a phocenin that turns litmus red; however, the amount of acid liberated is very small, as can be ascertained by treating phocenin with magnesia.

579. When 100 parts of phocenin were treated with potassium hydroxide, they gave<sup>2</sup>:

'Dry' isovaleric acid.....	32.82
Glycerin.....	15.00
'Free' oleic acid.....	59.00

## § 3. PREPARATION

580. (See Book IV, Chapter 3.)

## §4. NOMENCLATURE

581. *Phocenin* is derived from the Latin *phocæna*<sup>3</sup>, "porpoise".

## § 5. HISTORY

582. I spoke about it in a paper presented to the Academy on February 26, 1818.

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<sup>1</sup> The fatty acid the author called *phocenic acid* (Chapter 4) is nowadays called 'isovaleric acid' and this is the term that has been used in the translation. Accordingly, the *phocénine* discussed in the present chapter could be called tri-isovalerate because as will be

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explained in due course, the author “inferred the existence of the fat principles butyric, caproic, caprin and phocenic which on saponification would yield solely butyric, caproic, capric and phocenic acids respectively.” “The possibility that pure fat principles might contain more than one fatty acid was not recognized by Chevreul, nor by those who followed him.” (Albert B. Costa, *Michel Eugène Chevreul, Pioneer of Organic Chemistry*, The State Historical Society of Wisconsin, Madison, 1962, pages 58 and 94 respectively). Chemically speaking, phocenin is therefore not the same as tri-isovalerate and accordingly, the term phocenin will be used as such.

<sup>2</sup> There must be a printing error in this table since the figures don't add up to 100.00.

<sup>3</sup> According to the Oxford English Dictionary, this should be *phocoena*. The word is no doubt related to φώκη, seal.