

**FLAVOURING
MATERIALS, NATURAL
AND SYNTHETIC**

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Flavouring materials, natural and synthetic by A. Clarke

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A. CLARKE

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FLAVOURING MATERIALS

NATURAL AND SYNTHETIC

BY

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PREFACE

This volume represents the accumulated notes of a number of years during which the author has been connected, in a chemical and technical capacity, with the foodstuff and beverage trades. Several excellent books are in existence which deal in a specialised fashion with certain sections of flavouring materials, *e.g.* essential oils; also a number of contemporary journals deal regularly and systematically with many of the products mentioned. It is intended, however, that the notes gathered herein should form a work of reference, of a more comprehensive type than has yet been published, for the whole of foodstuff and beverage manufacturers, many of whose flavouring materials are drawn from widely varying sources.

Frequent reference to contemporary scientific literature is made in the text with a view to providing a ready means of following up information dealing with any special flavouring material.

A. C.

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INTRODUCTION

THE SENSE OF TASTE

BEFORE commencing the treatment of the various substances which are used as flavouring agents it is proposed briefly to describe the physiology of the sense of taste and to indicate the importance of flavouring bodies in the assimilation of food-stuffs.

Closely allied to the sense of taste is that of smell. The two are frequently referred to as the "chemical senses" because their excitation depends upon specific chemical substances. In a great many cases, especially with aromatic bodies, the two senses function together. Experimentally, they may be readily divided. If the sense of smell is suspended either by nasal catarrh or by closing the nostrils many of the aromatic flavours cannot be distinguished. The gustatory sense is, in fact, the most uneducated and backward of the senses in the majority of individuals. The influence of sight is also interesting in this respect; if the suggestion conveyed by the eyes is removed, either by blindfolding the subject or by making the object unusual in appearance, the sense of taste is found to be very erratic.

The four primary or elementary tastes are sweet, bitter, acid and saline, and it is usual for the taste organs of the tongue to be able to distinguish these under any but very abnormal circumstances. Most flavouring bodies are,

however, of a compound character, having a tendency towards one or more of the above primary tastes and containing also some aromatic body, either of a volatile or extractive nature. In dealing with such bodies the combined faculties of taste and smell are required, but commonly both are classified as taste.

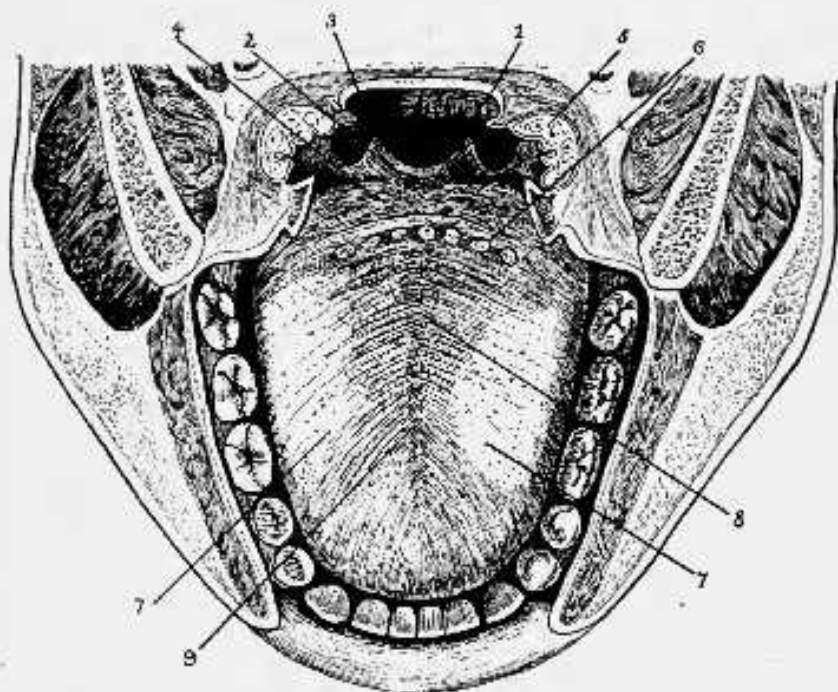


FIG. 1.—Horizontal Section through the Mouth, showing Organs of Taste.

(1) Pharyngo-palatine arch, (2) glosso-epiglottic fold, (3) epiglottis, (4) pharyngeal portion of tongue, (5) palatine tonsil, (6) vallate papillæ, (7) fungiform papillæ, (8) raphe of tongue, (9) conical papillæ. (After Cunningham.)

The dorsal surface of the tongue is divided into two distinct sections, as shown in Fig. 1, by a V-shaped row of eight or nine large circumvallate papillæ. The section