

THE ROLE OF
SENSORY
ANALYSIS
IN
QUALITY
CONTROL

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The Role of Sensory Analysis in Quality Control

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Foreword

This publication on the sensory evaluation function within manufacturing quality assurance/quality control (QA/QC) programs was sponsored by ASTM Subcommittee E18.07, a subcommittee on Quality Assurance, of ASTM Committee E-18 on Sensory Evaluation of Materials and Products. The scope of the subcommittee was to identify and recommend procedures for using sensory analysis in QA/QC functions.

Many people have contributed ideas for this manual from their actual work experience. Sensory programs vary with the diversity of products, size, and needs of individual plants and companies. Because there are few “standard procedures” for sensory testing in QC programs, the information presented in this document is intended to be used as reference material for developing sensory test programs appropriate to the ideas and needs of individual QC groups. Supplemental references related to QA procedures and sensory methods are listed in the bibliography.

Acknowledgments

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Related ASTM Publications

Manual of Sensory Testing Methods, STP 434 (1968), 04-434000-36

Guidelines for the Selection and Training of Sensory Panel Members, STP 758 (1981),
04-758000-30

Physical Requirement Guidelines for Sensory Evaluation Laboratories, STP 913 (1986),
04-9130001-36

ASTM Manual on Presentation of Data and Control Chart Analysis, MNL 7 (1990),
28-007089-34

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Preface

This manual on *The Role of Sensory Analysis in Quality Control* describes general procedures and gives background information regarding the use of sensory testing as part of a quality control function in a manufacturing plant. Chapters 2 through 4 are intended to help those readers who are new to the sensory field, with a need for background material on establishing sensory testing in a plant. Those experienced with plant quality control may wish to go directly to Chapter 5 for sensory testing applications.

TERMINOLOGY AND DEFINITIONS USED IN THIS PUBLICATION

1. *Quality Assurance*—All those planned or systematic actions necessary to provide adequate confidence that a product or a service will satisfy given needs [1].

Discussion

- As a function of corporate management, quality assurance sets the policies, systems, programs, and procedures to be carried out by quality control.
 - Quality assurance defines the function of quality control and its programs and procedures.
 - Historically, quality control has permitted certain percent defectives. QA aims at achieving lower defect levels.
2. *Quality Control*—The operational techniques and the activities that sustain quality of product or a service that will satisfy given needs; also the use of such techniques and activities [2].

Discussion

- Quality control, as a function closely aligned to the manufacturing process, implements the quality specifications for raw materials, intermediate products and finished products as established by quality assurance.
3. *Sensory Evaluation*—The analysis of a substance(s) through the use of any or all of the senses [3]. A scientific discipline used to evoke, measure, analyze, and interpret reactions to those characteristics of foods and materials as they are perceived by the senses of sight, smell, taste, touch, and hearing.

Discussion

- Sensory evaluation measures perceived product characteristics, using one or more people as measuring devices.

REFERENCES

- [1] ANSI/ASQC Standard A3-1978, American National Standards Institute, Inc., 1430 Broadway, New York.
- [2] American Society for Quality Control, 230 W. Wells St., Milwaukee, WI.
- [3] "Minutes of Sensory Evaluation Division Business Meeting at 35th Annual Meeting," Institute of Food Technologists, Chicago, IL, 1975.

