Control Points and Critical Control Points

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INTRODUCTION

Control points are an integral part of a food processor's comprehensive product control system and can be used, together with HACCP, to help ensure that the consumer receives a safe food product with consistently good quality. The integration of control points with HACCP to maintain the safety and quality of foods has been described by Sperber (1991).

The National Advisory Committee on Microbiological Criteria for Foods (NACMCF) defines a control point as any point in a specific food system where loss of control does not lead to an unacceptable health risk (NACMCF 1990). But as the food scientist begins to develop a HACCP system to control the biological, chemical and/or physical hazards of a food processing operation, difficulty may arise when the time comes to distinguish between control points and critical control points. As a result, the food manufacturer very often has more critical control points than expected, and perhaps many more than needed. This chapter will present a method of more easily identifying control points and understanding their role in addressing the safety, quality and regulatory aspects of food production.

DEFINITIONS

As part of the process of more easily identifying control points, and then separating control points from critical control points, it is necessary to slightly modify the currently accepted definitions (NACMCF 1990). This revised definition would read: Critical Control Point—Any point in a specific food system where loss of control may result in a high probability of a health risk. The revised
definition of critical control point now contains the concept that if control of the point is lost, there must be a high probability that a health risk will occur. On the other hand, if control is lost but the risk is low that a health risk will occur, then the concern should be classified as a control point. A Control Point definition would then be: Any point in a specific food system where loss of control may result in an economic or quality defect, or the low probability of a health risk occurring.

**COMPREHENSIVE PRODUCT CONTROL SYSTEM**

If the definitions of critical control point and control point are then applied to the development of a comprehensive product control system, where all phases of safety, quality and regulatory are addressed, then Fig. 11-1 could be used to illustrate the overall relationship between the high and low risk concerns for a specific food product. Listed under HACCP are the critical control points that if not kept under continuous control will very likely lead to a health risk. Thus, the risk should be high for those points classified as critical control points.

The United States Department of Agriculture has appropriately placed a high priority on food safety, and proposes to use HACCP to control only the safety concerns of a food process, rather than as a system to manage quality and economic issues as well (USDA 1990a, b). This allows the food processor, in turn, to focus on the control of key safety issues for a given product and process. The National Food Processors Association supports the concept that HACCP

![FIGURE 11-1. Relationship between high risk and low risk concerns for a food product.](image-url)