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# Rework: What to Do?

***How rework is handled and used is one very important factor for financial success.***

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Dealing with out-of-spec product due to processing or quality issues has been a dilemma for confectionery manufacturers since the first candy product was developed. Who knew I would have a life-long relationship with rework when I became a food scientist and confectioner? Learning how to manage and utilize rework when developing new products has helped me to add quality, value and cost savings for my employers. With this in mind, this paper will focus on the definition of rework, sources and causes of rework, processing and formula considerations when utilizing rework, examples of how rework can be used and the economic impact of using, or not using, rework.

## **DEFINITION OF REWORK**

Confectionery rework can be defined as the collection and use of candy products or materials that do not meet the given specification, or as confectionery materials used again in an altered form to reduce waste. Under the Code of Federal Regulations (CFR) (21CFR110), rework is defined as “clean, unadulterated food that has been

removed from processing for reasons other than unsanitary conditions or that has been successfully reconditioned by reprocessing and that is suitable for use in food.” Therefore, rework can be readily used as long as it is handled under good manufacturing practices (GMP) in a sanitary manner that ensures that the rework is free from microbial, chemical, insect and foreign material contamination.

## **SOURCES AND CAUSES OF REWORK**

Rework can occur throughout the entire process of making confectionery products. Rework may be caused by accident or mistakes such as operator error, equipment malfunctions, ingredient quality, etc., or deliberately generated by separation such as screening for size, appearance or shape. Some typical problems that occur in manufacturing and produce rework follow:

- R&D testing
- Process scale-ups and product commercialization
- Product changeovers
- Equipment malfunctions