TECHNICAL BULLETIN

THE DO'S AND DON'TS
FOR MAKING REDUCED FAT BAKED GOODS USING DRIED PLUMS

The elimination of fat in many bakery products runs counter to bakery tradition and science. The availability of numerous synthetic and natural commercial fat replacers does not make understanding and applying the process of fat reduction or fat elimination any less confusing.

These pages list helpful tips when using dried plums to replace butter, shortening, and oil in bakery formulas. *These tips **ONLY** apply to dried plums* so caution is advised if alternative fat replacers are used.

An evaluation of the composition of dried plums by the California Dried Plum Board uncovered a unique combination of naturally occurring components that form a *fruit system* responsible for dried plums' fat sparing abilities:

Pectin: Dried plums contain a unique blend of both soluble and insoluble pectins (7.5%) which help to form a *stable film around air and leavening gas during mixing and bench time.* The pectins are also believed to have the ability to *entrap flavor components for gradual release* during mastication.

Sorbitol/Reducing Sugars: Dried plums are unique in their naturally high sorbitol content (15%). Sorbitol is an *effective humectant,* and thus helps to keep bakery products *soft and moist* over an extended shelf life. The reducing sugars, fructose and glucose work with sorbitol to provide *further humectancy.*

Malic Acid: Dried plums contain about 2% naturally occurring malic acid which has been shown to be an *effective flavor enhancer.* Malic acid is *released more slowly* than other organic acids, and thus has a greater carry-through during the chewing process. Additionally, malic acid helps to *inhibit microbial spoilage* and can also serve as the *natural acid component* of chemical leavening systems.

Thus, it is possible to replace a portion of the butter, shortening, or oil in bakery formulas using dried plums with little or no noticeable change in the sensory characteristics of the end product. With proper fine tuning, reduced-fat baked goods using dried plums are actually preferred over full-fat alternatives. It only takes the *commitment of the baker* to make it happen.