

December 12, 1969

TO: C. O. Chichester

FROM: M. W. Miller

RE: Report requested by E. C. Maxie in his letter of October 17, 1969

The following work has been conducted this season on the study of the effects of dehydration, processing and storage on the flavor of prunes and prune products.

1. The 1969 season permitted collection of known samples so results obtained could be correlated to previous treatment. In each of two prune producing areas, Sacramento Valley (Yuba City) and North Coastal (Healdsburg) single lots of fresh prunes were selected as representative of the average seasonal quality. Each was subdivided into two lots which were then dehydrated commercially by parallel- and by counter-flow procedures. Samples for chemical composition and for gas-liquid chromatography were taken from fresh, half-dried and fully dried fruit. After equilibration of moisture content the fully dried (natural condition) prunes were stored under simulated commercial conditions. Periodic samples will be analyzed for effects of storage.

After three months storage prunes have been processed (simulated commercial conditions and also at a reduced rehydration temperature), half had the pits removed and samples of both whole and pitted prunes stored to study processing storage effects. Also stored prunes were segregated into two sizes and extracted with water producing prune juice by both batting diffusin and by the disintegration procedures. Samples have been stored.

Both chemical analyses and gas-liquid chromatographic profiles are being done on all samples. Samples awaiting analyses are kept frozen to minimize additional changes.

2. & 3. It is easier to combine these items.

Food Science and Technology is the participating department. Besides academic personnel, one Laboratory Technician IV works full-time on dried fruit research and has the general assistance of Laboratory Technicians and Helpers for varying periods of time as required and as available.

Item	To July 1, 1969	July 1-Dec. 1969	Jan.-July 1970
Associate Professor III	---	---	(Estimated)
Laboratory Technician IV	5,000	4,000	4,500
General Assistance	1,282.86	1,417.99	2,000
Supplies and Expenses	1,050.95	967.52	900
Equipment and Facilities	---	2,584.85	350
Employees Benefits	39.70	30.00	50
Total	7,373.51	9,000.36	7,800

4. Research during Jan. 1-June 30, 1970 will be the continuation of analyses on the samples now in storage. This work will very likely continue beyond this period due to the many analyses to be done. It is also hoped that the study on essence recovery and add back to prune products can also be initiated during this period. The period July 1-Dec. 31, 1970 will continue this work and if needed additional samples will be prepared and processed to obtain supplementary information to the present study. The personnel and expenses are anticipated to be similar or somewhat higher as increased by cost of living adjustments.

MWM:jh