

# USE OF PALM OLEIN IN SALAD DRESSINGS

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## INTRODUCTION

The word "salad" comes from the Latin *herba salata* "salted herbs". Its derivation suggests that in the early days, salads must have been freshly picked vegetables, seasoned with salt and eaten raw. However, more elaborate salads were known by the time of classical Rome.

Salads are served at the start of a meal, they excite the palate and stimulate the appetite for the courses that follow. Vegetables still predominate in salads but any kind of fish, meat or poultry which is dressed with a sauce (usually some variation on a vinaigrette), a cream sauce or the smooth emulsion of egg yolks and oil called mayonnaise, can be considered a salad.

The dressing that melds the disparate ingredients of salads includes oil—the major constituent of both vinaigrette and mayonnaise, which are themselves the basic source of dressings, each designed by its own name.

Salad dressing can refer to a specific product as well as to a general category for any kind of seasoned dressing used for salads.

Salad dressing contains oil, egg yolks, acidifying ingredients and cooked or partially cooked starch

paste. The paste maybe prepared from a food starch, tapioca flour, wheat flour, rye flour or any combination of these. The proportions of oil and eggs are balanced to obtain body, viscosity and texture.

## OILS USED FOR SALAD DRESSINGS

The commonly used oils in the manufacture of salad dressings are sunflower, corn, soyabean, canola and cottonseed oils. Palm oil and peanut oils are not used because they tend to break the emulsion at low (refrigeration) temperature. In product development work conducted in PORIM, palm olein, the liquid fraction of palm oil, was used for making salad dressings. It was found that the higher IV palm oleins (IV 60 - 67) were suitable to be used as salad oil and for making salad dressings. The regular palm olein (IV 56-58) was not suitable as the end product would harden up during storage at refrigeration temperature. Figures 1 and 2 show pictures of salad dressings made using high IV palm olein.



Figure 1. "Thousand Island" dressing made with palm olein.

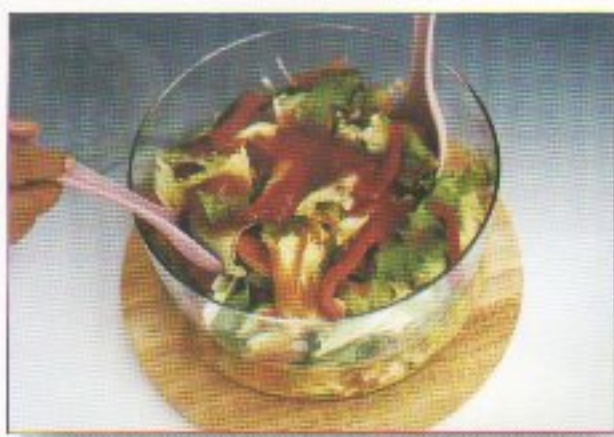


Figure 2. French dressing made with palm olein.

## ADVANTAGES OF USING PALM OLEIN

In addition to its consistent supply and availability,

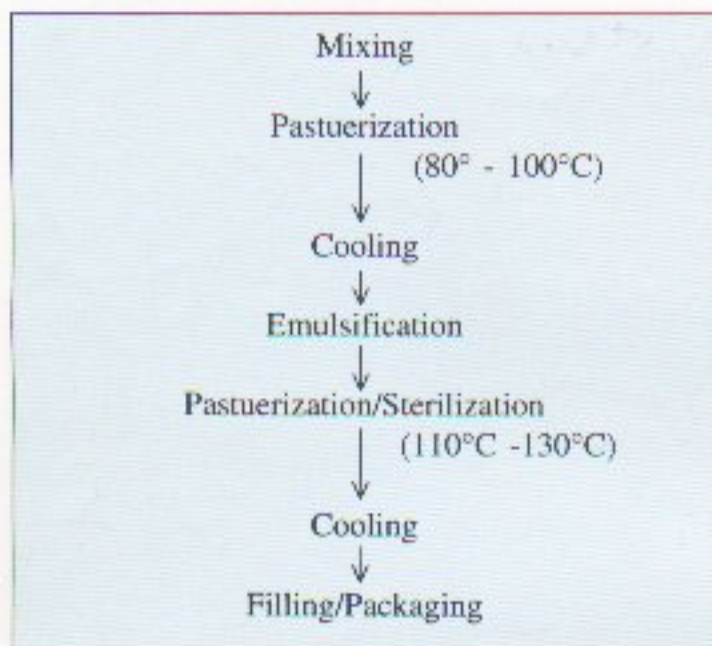
palm olein is competitively priced compared to other vegetable oils such as sunflower, soya bean, corn, canola or cottonseed. Another advantage is that palm olein is a very stable oil due to its high content of vitamin E, a natural anti-oxidant.

## PRODUCTION OF SALAD DRESSINGS

Basic ingredients to make a cooked palm-based salad dressing are palm olein, egg yolk, vinegar, starch, sugar, salt, mustard and water.

The process of making salad dressings involves preparation of the starch paste, mixing and homogenizing the ingredients.

Steps in the production of salad dressings on a larger scale are shown in *Figure 3*.



*Figure 3. Large Scale Production of Salad Dressing*

## VARIATIONS OF SALAD DRESSINGS

Other ingredients can be added to the basic recipe to achieve different flavours. Variations in salad dressings can be obtained by adding a variety of ingredients, for example, chopped pickles, olives, minced onion, chili sauce, Worcester sauce, grated cheeses of all kinds, crushed pineapple, chopped maraschino, cherries, etc.

## SENSORY EVALUATION OF SALAD DRESSINGS

Separate sensory evaluations were conducted using international panelists who came from various

countries such as the United Kingdom, Germany, the Netherlands, the United States, Canada, Japan, Korea, India, Pakistan and Malaysia. The local judges preferred a salad dressing that was more spicy. In a sensory evaluation session using sixteen foreign judges, they were given three samples of salad dressings coded with three-digit random numbers. One of the samples was a plain salad dressing containing palm olein, another one was a "Thousand Island" dressing containing palm olein and the third sample, an imported commercial "Thousand Island" dressing made with soyabean oil. Results showed that "Thousand Island" dressing containing palm olein made in PORIM received comparable scores as the imported commercial product in terms of colour, aroma, consistency and taste. Thus the results indicated that good quality salad dressing can be made using palm olein.

## STORAGE OF SALAD DRESSINGS

Salad dressings are good media for growth of staph bacteria since they contain egg. Therefore, salad dressings should be kept refrigerated to prevent contamination. Microbiological analyses on salad dressings made using palm olein have been done and the results showed that the samples were free of any microorganisms when stored for 3 months at refrigeration temperature.

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