

# WHICH DO YOU CHOOSE?

Drawn up for a Los Angeles County Board of Supervisors vote on permitting raw milk in the County.

<b>Raw Certified Milk</b>	<b>Pasteurized Milk</b>
<b>A. Cleanliness Regulations</b>	<b>A. Cleanliness, CA State &amp; County Law</b>
1. Tested daily at an independent laboratory for the Certified Milk Commission.	1. Tested once a month by the Health Department
a. Bacteria count for standard plate count: 10,000 per ml maximum for Certified Milk or Cream.	a. Bacteria count for the standard plate count: 50,000 per ml maximum before pasteurization; 15,000 per ml maximum after pasteurization for milk, 25,000 per ml maximum for cream.
	b. May not exceed 750 Coliform per ml in raw milk before pasteurization, taken at farm pick-up.
2. Streptococci test once a month.	2. No regulation requires test for Streptococci.
<b>B. Herd tests in Los Angeles County, CA</b>	<b>B. Herd tests in Los Angeles County, CA</b>
1. All dairy cows in a certified milking are vaccinated for brucellosis between the ages of 2-6months.	1. All dairy cows are vaccinated for brucellosis between the ages of 2-6 months. All dairy cattle moving within the state must bear evidence of official calthood vaccination.
2. Each certified cow is blood tested for brucellosis before entering the milking herd and receives a blood test at least once a year; thereafter reactors are removed.	2. All dairy cattle must be blood tested for brucellosis if imported into California and reactors are removed.
3. All raw certified milk is ring tested at least 4 times a year for brucella. If the ring test is positive, then entire herd is blood tested for brucellosis and any positive reactors are removed.	3. The milk from all dairy herds is ring tested at least 4 times a year for brucella. If the ring test is positive then the entire dairy herd is blood tested for brucellosis and any positive reactors are removed.
4. TB skin test is performed annually on all cows in the certified milking herd by a state veterinarian. If reactors were found they would be removed from the certified herd. All certified milk dairy herds are free and are maintained free of TB because of constant vigilance and testing.	4. TB Skin Test is performed on all cows by a state veterinarian at intervals longer than one year. If reactors are found, additional tests may be required. Reactor cows are removed.
5. Herd sanitarian from the County Medical Milk Commission visits the dairy weekly or more often. A health inspector from the county visits the dairy at least monthly.	5. Health inspector visits dairy monthly.
<b>C. Employee Health Examinations</b>	<b>C. Employee Health Examinations</b>
1. Once a month examination of each employee at certified farm. All new employees have a complete physical examination and tests when starting to work on a certified farm.	1. Examination required at time of employment.

2. Once a month throat culture and examination for streptococcus.	2. None required.
3. During the year other tests are made at regular intervals. Another step to insure disease-free milk.	3. None required.
4. Stool specimen is required from each employee bi-annually.	4. None required.
5. Chest x-ray or skin test for TB required annually.	5. None required.
<b>D. Nutritional Values</b>	<b>D. Nutritional Values</b>
1. <b>Enzymes</b> , catalase, peroxidase and phosphatase are present.	1. Pasteurization destroys the <b>enzyme</b> phosphatase.
a. Phosphates is needed to split and assimilate the mineral salts in foods that are in the form of phytates.	a. Absence of phosphatase indicate that milk has been pasteurized.
b. Wulzen Factor (anti-stiffness) available.	b. Wulzen Factor destroyed (anti-stiffness nutrition factor lost).
c. <u>X Factor (now believed to be vitamin K<sub>2</sub>)</u> in tissue repair available.	c. X Factor--No evidence of alteration by pasteurization.
2. <b>Protein</b> --100% metabolically available; all 22 amino acids, including the 8 that are essential for the complete metabolism and function of protein.	2. <b>Protein</b> --Digestibility reduced by 4%, biological value reduced by 17%. From the digestibility and metabolic data it is concluded that the heat damage to lysine and possibly to histidine and perhaps other amino acids destroys the identity of these amino acids and partly decreases the absorbability of their nitrogen.
3. <b>Vitamins</b> --all 100% available	3. <b>Vitamins</b>
a. Vitamin A--fat soluble	a. Vitamin A--destroyed
b. Vitamin D--fat soluble	b. Vitamin D--Not altered
c. Vitamin E--fat soluble	c. Vitamin E--Not altered
d. Vitamin K--fat soluble	d. Vitamin K--Not altered
e. Vitamin B--Complex: Vitamin Bw--Biotin Vitamin B --Choline Vitamin Bc --Folic Acid Vitamin B1 --Thiamine Vitamin B2 --Inositol Vitamin B2 --Nicotinic Acid Vitamin B2 --Riboflavin Vitamin B2 --Pantothenic Acid Vitamin B3 --Niacin Vitamin B6 --Pyridoxine Vitamin B12--Cyanocobalamin	e. Vitamin B complex--pasteurization of milk destroys about 38% of the vitamin B complex.
f. Vitamin C	f. Vitamin C is weakened or destroyed by pasteurization. Infants fed pasteurized milk exclusively will develop scurvy.
g. Antineuritic vitamin	g. Antineuritic vitamin: Testing of pasteurized milk indicates destruction of this vitamin.
4. <b>Minerals</b> --all 100% metabolically available.	4. <b>Minerals</b> -- After pasteurization the total of

	soluble calcium is very much diminished. The loss of soluble calcium in regards to infants and growing children must be a very important factor in growth and development, not only in the formation of bone and teeth, but also in the calcium content of the blood, the importance of which is now being raised.
5. <b>Carbohydrates</b> --easily utilized in metabolism. Still associated naturally with elements (instable).	5. <b>Carbohydrates</b> —no evidence of change by pasteurization.
6. <b>Fats</b> --all 18 fatty acids metabolically available, both saturated and unsaturated.	6. <b>Fats</b> --Pasteurization harms the fat content of milk.

### E. Possible Damage to the Health of Consumers from Drinking Pasteurized Milk

1. Dr. J. C. Annand has written a series of articles in which he has advanced the theory that the increase in the incidence of heart disease was proximately related to the on set of pasteurization of milk. Different population groups were studied in various parts of the world. His theory is that the heat process of pasteurization alters the protein found in milk and as a result heated protein is responsible for the large increase in the incidence of heart trouble in citizens of western civilization, during the course of the past generation.
2. Dr. Kurt A. Oster has advanced the theory that homogenization of milk is proximately related to the atherosclerosis which is so prevalent in citizens in developed countries of the western world. The reduction in the size of the fat particles caused by homogenization permits them to be assimilated into the stomach lining in a manner that was not contemplated by nature. When these fat particles along with xanthine oxidase get into the bloodstream the human system sets up a defense mechanism which results in the scarring of arteries.