

**Examination and Stability of Coffee Concentrate
made from the
Filtron® Cold Water Coffee Brewing System**



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Filtron® extracted coffee concentrate held at 75°F

Test Interval	Aerobic plate count (cfu/ml)	Coliforms (cfu/ml)	Yeast (cfu/ml)	Mold (cfu/ml)
Initial	<10	<10	<10	<10
Week 1	<10	<10	<10	<10
Week 2	<10	<10	<10	<10
Week 3	<10	<10	<10	<10
Week 4	<10	<10	<10	<10
Week 5	<10	<10	<10	<10
Week 6	<10	<10	10	40

Chemical attributes of brewed and extracted coffee

Test Variable	Titrateable acidity (% acetic acid)	Soluble solids (%)	Caffeine (%)	pH
Slurry	---	---	---	4.89
Filtron® extracted - 6 weeks old	0.01	0.53	0.04	4.81
Filtron® extracted - fresh	0.05	0.87	0.05	4.89
Regularly brewed - fresh	0.07	1.14	0.08	4.74

Conclusions

Based on the above results, extracting coffee concentrate at room temperature (75°F) using the Filtron® Coffeemaker does not pose a microbiological hazard. The filter, if used and cleaned properly, should not become a microbiological reservoir for public health significant microorganisms. The shelf-life of the coffee concentrate held under optimal conditions (45°F) is greater than or equal to 6 weeks. At the six week test interval, a thin layer of microbial growth was evident on the surface of the concentrate held at 75°F. Therefore, the shelf-life of the coffee concentrate held at abuse conditions is 5 weeks.

Coffee made from the coffee concentrate exhibited slightly less titrateable acidity, soluble solids and caffeine compared to the regularly brewed coffee. The pH of both concentrate coffee samples were slightly higher than that of the regularly brewed coffee.

Objective

The objective of this study was to examine the shelf-life of Filtron® extracted/brewed coffee concentrate held at optimal and abuse conditions. In addition, the extraction/brewing process was examined to determine if the process represented a microbiological hazard. Chemical attributes of regularly brewed and Filtron® extracted coffees were compared.

Analysis

The following parameters were tested:

- * Suspension liquid for storage of filter. Boiled on August 8, rinsed, stored in refrigerator until August 13, tested for aerobic plate count, coliforms, yeast & mold on August 13.
- * Microbiological quality of coffee/water slurry during the extraction/brewing process. Slurry was tested for aerobic plate count, coliform, yeast and mold at time 0 and at 12 hours.
- * Shelf -life of extract under ideal and abuse conditions. Ideal conditions were approximately 45°F and abuse conditions were 75°F. The coffee concentrate was tested for aerobic plate count, coliforms, yeast and mold once a week for 6 weeks.
- * pH in slurry (grounds + water) during the extraction process.
- * Titratable acidity, soluble solids, caffeine and pH tests were performed on coffee made from freshly extracted Filtron® concentrate, six week old Filtron® brewed concentrate and regularly brewed coffee.

Methods

All microbiological tests were performed according to FDA Bacteriological Analytical Methods, 7th ex. All Chemistry tests were performed according to Official Methods of the AOAC International, 16th ed.

Results

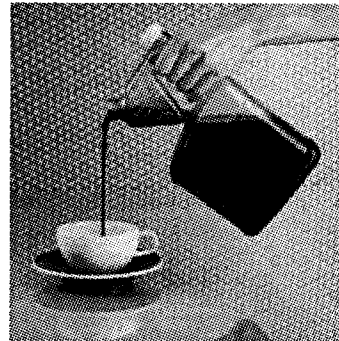
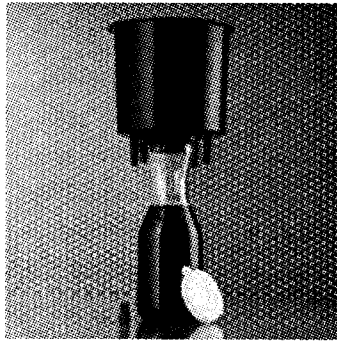
Suspension Liquid for Storage of filter.

Aerobic plate count (cfu/ml)	Coliforms (MPN/ml)	Yeast (cfu/ml)	Mold (cfu/ml)
70	<3.0	60	10

Filtron® extracted coffee concentrate held at 45°F

Test Interval	Aerobic plate count (cfu/ml)	Coliforms (cfu/ml)	Yeast (cfu/ml)	Mold (cfu/ml)
Initial	<10	<10	<10	<10
Week 1	<10	<10	<10	<10
Week 2	<10	<10	<10	<10
Week 3	<10	<10	<10	<10
Week 4	<10	<10	<10	<10
Week 5	<10	<10	<10	<10
Week 6	<10	<10	<10	<10

FILTRON® Coffeemaker Brew Coffee with a cold water brewer



Filtron® Cold Water Brewer

If you want to eliminate the natural acidity from your coffee, Filtron's Cold Water Brewer is the system for you. It is ideal for people with sensitive stomachs. The best part of the system is the great coffee. It's perfect for hot coffee, iced drinks and blended coffee drinks.

Long History of Cold Water Brewing

The method, popular among Dutch settlers in Java in the 19th century, steeps coarsely ground coffee in cold, fresh water for up to 24 hours. When filtered the liquid concentrate, or essence, may be stored in the refrigerator for up to six weeks or may be frozen for longer periods. When reconstituted, it becomes a delicious smooth-tasting low acid cup of coffee.

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Distributing**

Filtron® Coffee System

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