

The Untapped Potential of Liquid Coffee

BY PAUL A. KALENIAN

Recent innovations in the processing of freshly roasted coffee beans into liquid coffee extracts have resurrected liquid coffee from “vending machine” cup quality to “front of the house” cup quality. Liquid coffee brewers have quickly followed suit with handsome, user-friendly brewers whose appearance speaks of fresh-brewed taste. The combination of these two factors allows regional coffee roasters to create private label liquid coffee programs they are proud to offer to their customers.

The idea of making liquid coffee extracts is as old as the beverage itself. In fact, instant coffee powders and crystals are the result of dehydrating liquid coffee concentrates with either heat or refrigeration evaporation. Historically, most of the processes that convert coffee beans into liquid extracts or powders have been very harsh, and significantly damage or erase coffee’s very delicate fragrance. The taste is often caramelized, flat, and lacking acidity, much like a stale cup of coffee. Recent innovations in the coffee extraction process now allow the signature flavor and fragrance of varietal coffee types and roasts to be captured in a liquid extract.

It is obvious that coffee beans that grow in different countries, regions, altitudes and climates vary greatly in taste and aroma. Arabica coffee plants have over 300 subtypes, each with their own taste profile. The recent



This coffee extract product process tank is located at our 16,000 sq. ft. state-of-the-art production facility in Portland, Maine. Other related equipment is not shown due to the company's patent-pending process.

popularity of specialty coffee celebrates, for example, the bright fruitiness of a Kenyan, the syrupy smoothness of a Sumatran, or the bright sweetness of a Costa Rican coffee. At present the gap in taste and fragrance profiles between specialty coffee and commercial coffee is wide. And historically, the taste of liquid coffees has been only equal to or slightly better than the taste of instant coffee, trailing far behind the taste of commercial coffee beans.

An innovative and new extraction process allows liquid coffee extracts to compete directly with commercial coffee — and even compare favorably with specialty coffee. This new process requires that freshly roasted coffee beans from quality sources of green beans (low defect green coffee) be immediately ground and extracted.

The object of extraction is to produce a concentrate many times stronger than the beverage coffee. As with the roasting of coffee, there are many factors critical to efficient extraction and signature taste retention. It is interesting to note that numerous liquid coffee “extracts” are not extracts at all but instant coffee mixed with a limited amount of water. Some extracts are “fortified” with instant coffee to thicken them from 5:1 to a concentration as high as 120:1.

Often these extracts are “ingredient quality” rather than “beverage quality.” “Beverage quality” produces an extract that when properly diluted is considered identical in taste and aroma to fresh brewed. “Ingredient quality” extracts, often used in ice creams and “frappuccino”-type drinks, are only palatable with sugar, cream or both.

Some extraction companies will custom extract or toll extract your signature coffee or blends representative of your coffee company. This allows a coffee company to offer not only a liquid coffee program to its customers —

but a truly private label program using in-house beans, blends and roast profiles. Extractors who provide custom roast and extraction services have very fresh products and should not use instant coffees to fortify their products. It is evident in cup quality and customer satisfaction that these made-to-order extracts without additives are truly superior.

The actual process of extraction in terms of efficiency and yield effect both economics and cup quality. Since coffee beans are approximately 85% wood fiber, but only 15% soluble flavor, it is important to obtain all the flavor yet none of the wood by-product in the finished cup. Most people don't know that instant coffee powders are 10% to 35% soluble wood fiber. “Over-extraction” of these products is a standard manufacturing technique to improve “yield” which results in more weight of powder to sell. Some extracts are aromatized after manufacture to enhance their fragrance. These outdated manufacturing techniques result in liquid coffee products that have low cup quality and remain back of the house beverages.

Look for programs to custom extract your coffee and create a private label extract that is in keeping with your fresh grind and brew programs. A liquid program will open the doors wide to a new market, increasing a company's revenues. Perfect for high volume applications, it provides consistent taste without the waste.

The packaging and storage of extracts is as important as it is with beans and grinds. Use top-quality vapor barrier packaging with airtight, spring loaded sealed connectors. Coca Cola developed a system of bag-in-box storage that is well proven and eliminates the need for frozen extracts. Shelf stability is enhanced through the use of proper packaging, common sense storage, and a minimum amount of preser-

vatives. All extracts are best kept cool or refrigerated in storage. However, refrigeration should not be essential. As with coffee beans, keep no more than a 30-day supply at your customer's location. Rotate on a FIFO basis.

Liquid coffee brewers, due to their expense, should be placed in accounts using at least 30 lbs/week of beans. Since a typical 30:1 extract contains 8.81 lbs. of coffee beans per gallon, your customer will change their bag-in-box every other day. Each gallon bag-in-box will yield (500) 8 oz. cups. This keeps their liquid coffee program fresh, and your brewer “return on investment” on track. Ideal accounts for the use of liquid coffee include health care facilities, hotel/motel, theme parks, convention centers, casinos, sports arenas, corporate and collegiate cafeterias, fast food drive-thru windows and correctional facilities.

High volume users may want to “remote” and “rack” bag-in-box with 2.5 gallon packaging to supply uninterrupted coffee at casinos or convention centers. This is another good technique learned from Coca Cola.

As illustrated above, the world of liquid coffee is evolving rapidly due to consumer demand for convenience, consistency and — most of all — cup quality. Recent innovations in extraction and dispensing have closed the gap with fresh brewed and raised the bar on quality. Just as the taste distinctions between a 6-oz. Coke in a bottle and soda fountain Coke have been eliminated, liquid coffee is “The Next Big Thing” in the world of coffee. ☐

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