



# AD

MARCH 2004 • Vol. 1, No. 15 • AMERICAN DISTILLER: A SOURCE OF INFORMATION ON THE DISTILLING PROCESS

**The American Distilling Institute**  
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AD will promote distilling and discussion concerning Whisky, Malt Whisky, Blended Scotch Whisky, Bourbon, Rye Whisky, Vodka, Gin, Grappa, Eau de Vie, Schnapps, Calvados, Apple Brandy, Apple Jack, Liqueur, Cognac, Armagnac, Rum, Tequila, Cordials, Perfumes, Tinctures, Distillation, Pot Stills, Column Stills, Coffey Stills, and Aroma Therapy.

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The ADI is the collective voice of the new generation of progressive beverage, medical and aromatic distillers, and is dedicated to the mission of disseminating professional information on the distilling process. Please visit our Web site at [distilling.com](http://distilling.com).

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## First Pot Still USA Conference a Success by Tom McCormick / BEERWeek

The first ever Pot Stills USA Trade Show and Conference, a symposium to promote small scale artisan distilling, was held in the San Francisco Bay area on Feb. 27-28. Over 100 attendees attended the conference, which provided an interesting blend of information on all aspects of small scale artisan distilling. The conference was organized by brewpub pioneer Bill Owens, founder of Buffalo Bill's, one of the country's first brewpubs. Owens is now president and chairman of the American Distilling Institute.

The conference included informal tours of area distillers on Friday, while the trade show and panel discussions took place on Saturday inside the distillery at St. George's Spirits in Alameda. With large open warehouse doors allowing the sun to bathe the standing room only group of brewers, distillers and other interested attendees, speakers gave presentations on start-up, distilling techniques, marketing and other components of this growing new category. The conference atmosphere had a clear resemblance to the micro-brewing conferences of the early and mid-1980's. Despite the fact that a few artisan distillers have been in business for over ten years, most of the over 45 pot stills in the U.S. are recent start-ups, many of which are operated in conjunction with a craft brewing business.



Speakers from left to right:  
Colin Macphail, Distillery 209; Don Payne, Sweetwater Distillery; Jess Graber, Stranahan's Colorado Whiskey; Paul Case, Kolani Distillers; Ted Palmer, Santa Monica Distillery

A panel discussion on “Getting the Doors Open” clearly set the tone that starting a small distilling business is no easy, or quick, task. The panelists, from four operating distilleries, each agreed that the application process for a federal license from the Trade and Tax Bureau was at least 16-18 months. Other hurdles included unanticipated local fire codes, sewer restrictions (the effluent from a distillery is more polluting than that of a brewery), and other local regulations. Ted Palmer, from Santa Monica Distillery, who has been involved with three small brewery start-ups said that the process to open the doors of a distillery are “far more complex and time consuming” than that of a brewery.

Like brewing, distilling is an art and craft; and producing high-end spirits worthy of a shelf price that can generate sustainable profit margins is a complex and difficult task. Professor Kris Berglund from Michigan State University, which offers classes on distilling in their on-campus pot still, gave a presentation on the technical side of distilling production. Other speakers during various parts of the conference also offered a variety of technical and artisan procedures used in craft distilling.

The panel on “Marketing Your Products” sounded nearly identical to many panels at recent small brewers conferences. Access to market difficulties in a consolidating distribution network has created a huge barrier for craft distillers to build their brands. The panelists each related stories on an uninterested wholesale network beset by huge distillers and wineries who rob literally all mind share. Unable to afford sales staff, most small distillers are struggling to gain any kind of viable brand awareness, and each panelist agreed that a growing craft distilling segment would help all in the segment by promoting to the consumer the existence of high quality domestic spirits.

There are many similarities to the craft brewing industry, and there were many familiar faces at the conference from the craft brewing industry. Due to numerous production duplicities between brewing and distilling (industrial building, tanks, plumbing and electrical, bottling lines, etc.) it is significantly more cost effective for an existing small brewer to add a pot still than to open a stand-alone distilling operation. Efficiencies exist in sales and marketing as well, where many brewers already use liquor/wine distributors and have invested in developing a sales and marketing staff. Judging by those in attendance, there will certainly be more small brewers adding a pot still to their operation.



*California Craft Distillers meet outdoors in a breakout session to discuss the Type C license.*



*Attorney Marc Sorini uses PowerPoint to discuss label approval and registration of formulas.*

## US: Research sheds light on moonshine

Source: just-drinks.com editorial team

04 Feb 2004

**B**ased on research that bucks common perceptions of the drinks, the US-based International Center for Alcohol Policies (ICAP) says it believes most “moonshine” – alcoholic drinks produced illegally in a market – represents no threat to health. The findings have been published in a book produced by ICAP called “Moonshine Markets,” a new book.

“This book breaks new ground by filling gaps in our knowledge of locally produced alcohol, including consumption patterns,” says Marcus Grant, President of ICAP. “In some countries, we found that moonshine outsells commercially produced alcohol by a 4:1 ratio. Yet until now moonshine has been neglected by the scientific community, partly due to the difficulty in collecting data on a product that is often illegal.”

Among the findings is that toxic moonshine is the exception, not the rule. Samogon, drunk widely in Russia, provides evidence, ICAP said. Chemical analyses of 80 samples of samogon, a distilled spirit with an alcohol content similar to vodka, but not to be confused with counterfeit vodka, showed that half were characterized as alcohol beverages of “rather high quality.”

“According to a recent survey, rural Russians drink 4.8 times more samogon than vodka. Most explain their preference for samogon by the high price of official vodka. The average price of samogon was 15-20 rubles per 500 ml bottle compared with 40-50 rubles charged for a bottle of vodka,” ICAP said in a statement.

The study said some 30-40% of Russians surveyed made samogon themselves. The average cost of producing 0.5 liters was 8-10 rubles, or one-fourth the price of officially sold vodka. A 2001 survey in Russia found that mean yearly consumption was 16 liters of absolute alcohol – 13.2 liters from samogon and 2.7 liters from vodka.

However ICAP did say that an occasional “bad batch” slips by even careful local alcohol producers due to unhygienic production processes, resulting in poisonings and generating alarming global press reports.

And some unscrupulous producers flout quality controls, adding such toxic substances as battery acid, urea, and ammonium chloride to their products in order to obtain higher strengths of alcohol. These products can have alcohol content as high as 60%.

“But considering the amount of illegal alcohol that is drunk worldwide, alcohol produced this way is relatively rare,” ICAP said.

The book notes that moonshine beverages are produced at low cost. For non-factory produced alcohol, no advertising is needed, and there’s no brand name to sustain. There are no storage costs or transportation costs, and no tax to pay, although sometimes a bribe is customarily paid to an enforcement officer. Purchasers may be have to use their own containers. Low costs are passed on to consumers.

Contributor Eric Single, a Canadian researcher, said: “Small-scale noncommercial production also brings certain economic benefits to local economies, providing employment and income (often supplemental income) to producers and lower priced alcohol to consumers. “Indeed, in Russia, there are situations where money is scarce and noncommercial alcohol actually becomes an alternative to the official currency,” Single said.

Dr. Simpson said, “I suspect that every country in the world has a moonshine currency.”



Master Distiller, Emeritus

The stories about everything and anything, like the 300-pound bull shark, and the time spare ribs baking in bourbon blew open the oven door.

The tinkering in the kitchen to create the perfect beaten biscuit, tall, cold glasses of Kentucky Tea, that "emergency ham" in the trunk, strangers that came over for a drink and left as friends, friends that came over for a drink and left as family.

The unarguable fact that UK would win the championship; every year.

The strolls through the rackhouse to approve the best barrels, the old rocking chair slowly grinding against the front porch...

It takes a lot of heart to make so many good memories, and Booker, you had the biggest heart we ever knew. We will miss you dearly. Your family at Jim Beam Brands.

**Inquiry**

One of the major issues affecting the financial viability of our distillery operation is the unbelievable cost of insuring the operation (which is in our brewpub). Most insurance companies our agent markets our business to, refuse coverage because we have a distillery. Any ideas or thoughts? Do you know of any insurance carriers that cover distilleries?

Any guidance/help would be greatly appreciated – thanks so much!

Mariah Calagione  
Dogfish Head Craft Brewery

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mariah@dogfish.com

**Consulting Distiller**

Ravi Susarla  
2701 Oak Road #G  
Walnut Creek, CA 94596  
Tel/Fax: 925 934 5072  
ravi\_susarla@yahoo.com

•

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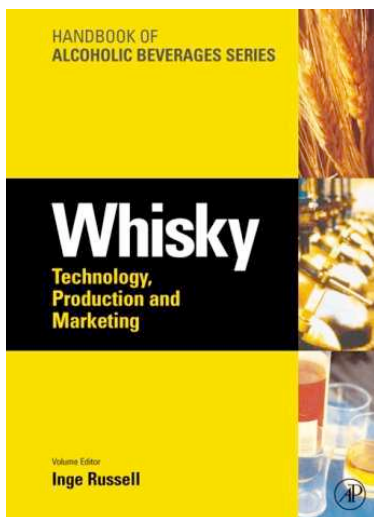
805.236.2322

**Correction**

Our apologies, the Distillers Resource Directory listing for Cemcorp was erroneous. It should have read:  
Cemcorp Ltd.  
Michael Coulter  
2170 Stanfield Road  
Mississauga ON L4Y IR5 Canada  
Toll free 1-888-672-2739  
Fax 905-566-7228  
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Engineering design for alcohol distilleries from micro distilleries to world size. Equipment designer's of pot stills, continuous stills for production of whiskey, vodka, rum, gin and liqueurs.



From Elsevier Website

## **Whisky Technology, Production and Marketing**

To order this title, and for more information, go to

<http://www.bh.com/apcatalog/default.asp?isbn=0126692025>

Inge Russell, University of Western Ontario, Canada

Charles Bamforth, Labatt Breweries of Canada

Graham Stewart, Labatt Breweries of Canada

### **Description**

Whisky: Technology, Production and Marketing explains in technical terms, the science and technology of producing whisky, combined with information from industry experts on successfully marketing the product. World experts in Scotch whisky provide detailed insight into whisky production from the processing of raw materials, to the fermentation, distillation, maturation, blending, production of co-products and quality testing, as well as important information on the methodology used for packaging and marketing whisky in the twenty-first century. No other book covers the entire whisky process from raw material to delivery to the market in such a comprehensive manner and with such a high level of technical detail.

### **Audience**

Fermentation scientists, brewers and distillers; employees in many areas (technical/production/R&D/marketing) of the alcoholic beverage industry, alcohol manufacturers, students studying whisky and alcohol, and individuals with an interest in whisky who want to have an advanced understanding of the science behind whisky.

### **Reviews**

“There is no doubt that it is an important contribution to the literature available on whisky and will be welcomed by all with an interest in this subject...This is an excellent book, which was badly needed. It has a consistent style, reads well and will I am sure become standard reference and learning text. Effort has been made to minimize the cost of this hardback edition for which we can be thankful. Students of distilling can rejoice!”

*-Journal of Institute of Brewing (2003)*

“This well-written book provides a wealth of useful information on all aspects relating to whisky production...Overall, this is a well-conceived, well-written, and well-organized book. This will prove to be an excellent addition to the bookshelf of any undergraduate or Masters level student who wishes to understand the field of whisky production and marketing.”

*-Alltech (October 2003)*

“5/5 stars This book is worth owning! This book is a real gem, it is well written by writers very knowledgeable in their field...I highly recommend this book and look forward to the next volume in the series.”

*-Robert Piggot (September 2003)* “

## Distinguishing Between Spirits of Coffey and Alembic Stills

by Oglu Berberoglu

Toronto, Canada

Aeneas Coffey (1780 – 1852), the inventor of the Coffey or columnar still, was an Irish (born in Dublin) excise man and inventor who worked for the British government in Scotland. During his long tenure as an inspector, he had plenty of time to inspect and study a range of mostly illegal and some legal stills. Over time his astute observation talent and engineering knowledge led him to invent a very efficient and fast still that accomplished three consecutive distilling operations in one step. It is less expensive to operate than any alembic still and much faster. The invention was patented in Dublin (1831).

The principle of distillation is simple. The important aspect remains the means of separating alcohol from an alcohol containing liquid. Alcohol starts to evaporate at 78.3 C at sea level, hence when an alcohol-containing liquid is heated to that temperature the alcohol starts to vaporize. A simple device composed of metal container connected to another by means of a swan neck can be employed as a still. In fact such crude devices have been and are still being used illegally in many countries to manufacture potent distillates, many unfit for human consumption due to their high fusel oil and methanol content.

Arab scientists trying to convert base metals to gold accidentally discovered the principle of distillation in the west. Al-cool an Arabic word is the root of the word alcohol.

Some researchers claim that Chinese employed a similar process to distil 3000 years ago, but so far, there is no conclusive evidence to prove this theory.

The Coffey still (aka columnar still) consists of three interconnected towers equipped with perforated trays stacked at intervals of approximately 20 – 30 centimetres. Each tower has two inlets; one for the alcohol-containing liquid the other for pressurized steam. The ferment is fed through the top inlet and the steam from the bottom. As the liquid trickles down the steam rises and literally strips the alcohol from it at a high temperature and speed. The vaporized alcohol travels to the top of the tower and to the next tower to undergo the same process. The third tower, usually

shorter, distills a smaller quantity, as the volume is now much smaller than at the beginning of the process.

At the end of the run, a highly purified (90 percent ABV) alcohol is obtained which is, regardless of the base material, tastes the same -colourless, and tasteless much like vodka or industrial food-grade alcohol. This alcohol consists mainly of ethyl alcohol and very little, lethal methyl alcohol.

Gin is redistilled alcohol in the presence of botanicals; vodka can be obtained quite simply by running pure alcohol through charcoal filters and diluting it to the desired level of ABV.

Using pure alcohol manufacturers produce liqueurs, by blending sugar, flavouring agents and colouring matter.

Blended whiskies contain both grain whisky from Coffey stills and whisky from alembic or pot stills.

A pot still consists of a copper container, connected to a receptacle by means of a metal swan neck. Pot still is fired by wood, or coal or gas.

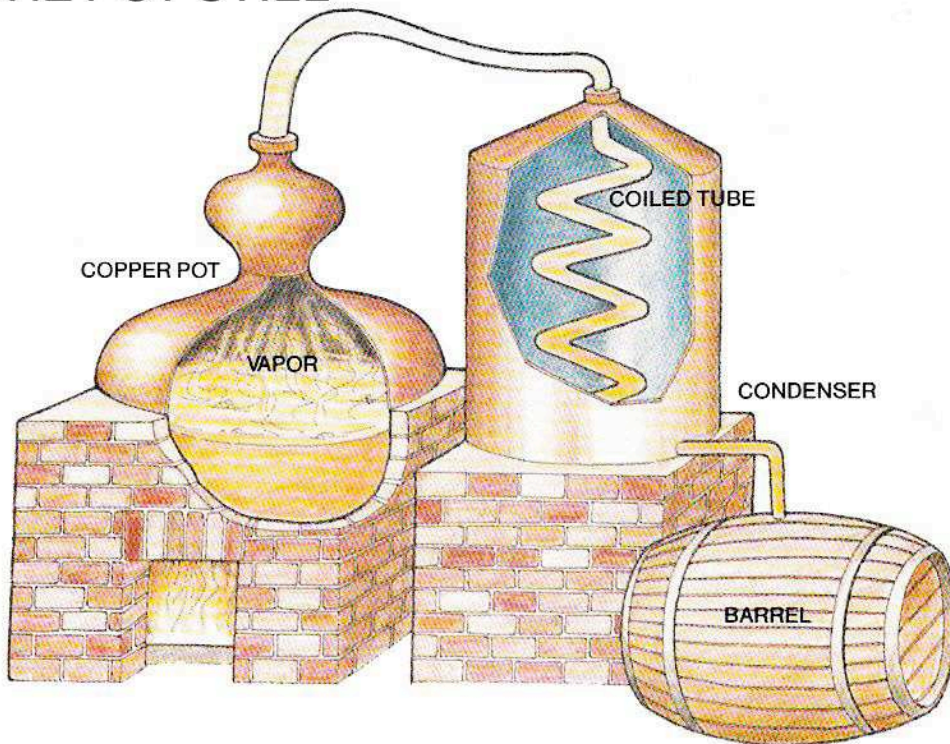
The still master has a much better control of the pot still temperature and can regulate the strength of the distillate to fit his objective. Generally, pot still distillates contain 70 percent or lower ABV. The rest is composed of phenolics of the base ingredient; thus the final product carries a distinct taste. A low alcohol wine will end up at 60 percent ABV distillate and similarly a fermented corn mash will taste of corn before aging in barrels.

Pot still distillates contain small amounts of fusel oils which are chemically “corrected” by barrel aging whereas the Coffey still discharges a pure distillate with negligible amounts of fusel oil, but also little taste.

Single malt Scotch whisky producers, a few rum manufacturers, as well as Armagnac and Cognac distillers, employ pot stills.

*continued next page*

## THE POT STILL



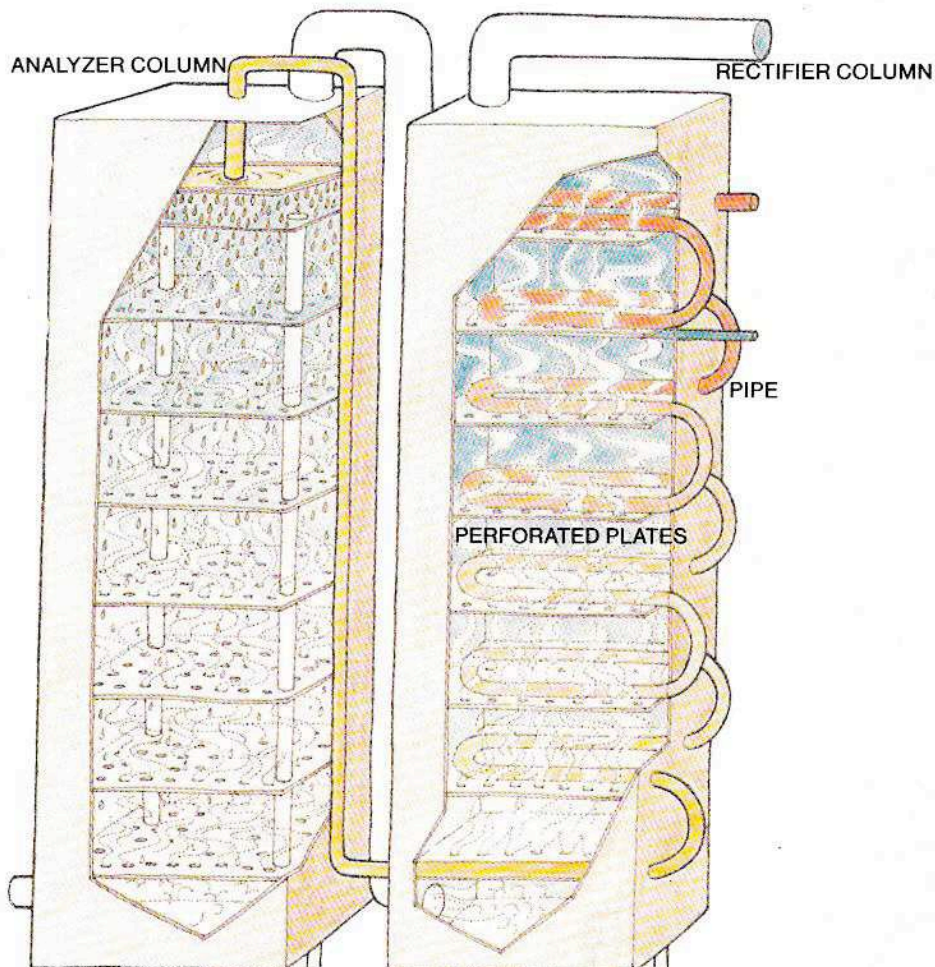
**B**ourbon distillers use both stills and blend according to their philosophy and market needs.

Alembic stills yield better taste and more characteristic distillates, but are slow, and require more labour. In addition the “head” and “tails” of each batch must be separated and redistilled. As you can appreciate alembic stills lack the efficiency and purity of Coffey stills. Still masters and manufacturers must choose either one to suit their marketing strategy and quality standards.

Small quality-oriented distillers everywhere, including ultra-premium vodka manufacturers use alembic stills.

In the USA, more and more small distilleries are coming on stream using alembic stills and marketing their products to niches prepared to pay for these high end products and appreciate their subtle, refined taste.

## THE PATENT STILL





# AMERICAN DISTILLER

## AMERICAN DISTILLING INSTITUTE 2004 MEMBERSHIP APPLICATION

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