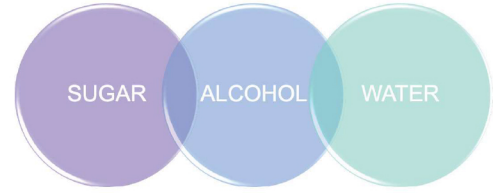


THE FUNDAMENTALS OF FREEZING

Adding frozen drinks to a cocktail menu is an excellent way to add value for accounts and their guests. There are multiple ways to create frozen drinks, but each method follows the same rule: Maintain a proper balance of sugar, alcohol, and water.



FREEZING THEORY

Water is the building block of frozen drinks due to Hydrogen bonding. The Hydrogen bonds form a crystalline structure that starts at 0°C.

FREEZING POINT DEPRESSION:

Adding a solute to a solution lowers the freezing point of the combined solution/solute below the freezing point of the pure solution.

SUGAR

Freezing Point:
186°C

Dissolved in solution, Sucrose and other types of sugars lower the freezing point of water.

Brix is how the concentration of sugar is measured.

ALCOHOL

Freezing Point:
-114.60°C

In combination with water, alcohol lowers the freezing point.

40% abv spirits freeze at -23°C.

WATER

Freezing Point:
0°C

Freezing point is lowered by the addition of other non-volatile substances like salt, glycol, or sugar.

EQUIPMENT TOOLS OF THE TRADE



BLENDER

The hard working, ice crushing, smoothie making appliance we all have.

PROS

- By far the best way to incorporate frozen drinks into your program with the cost lowest barrier for entry.
- Recipes are less dependent on Brix and alcohol content.
- Smallest footprint for your bar.

CONS

- Loud! Not great for a small and tight bar program.
- Overtime, depending on the ice program, the blenders will break down and need replacement parts.
- Difficult for high volume spaces.



GRANITA MACHINE

Granita machines use a central cylinder as the cooling element, freezing your beverage from the inside out. These are the types of machines you will often see in a New York Bodega.

PROS

- Works well for a high-volume bar.
- The method of freezing creates an excellent texture for frozen sours.
- No need to change any of the businesses electrical. Plug and Play.
- More expensive than a blender program but can be far less expensive than a slushy machine.

CONS

- Cannot be used in warm environments because they lack insulation.
- Most of the components are made of plastic, so daily maintenance is much more important.
- Because components are plastic, the machines are more likely to break down and need replacement parts.



SLUSHY MACHINE

These are the machines you see up and down bourbon street in New Orleans. Slushy machines have a "can" that freezes drinks from the outside, creating smoother texture.

PROS

- Many of these machines have a "refrigeration" mode that allows for the safe storage of drinks when the business is closed.
- Machines are insulated and can be used in warmer environments.
- Drinks freeze faster in these machines so there is a faster turnaround for cocktails in a high-volume environment.

CONS

- Machines are large and need an ample amount of space for ventilation. A very large footprint for most bars.
- Expensive. Slushy machines vary anywhere from 3k-20k depending on the volume and type of machine.
- Some slushy machines will not be compatible with a bars current power supply, so an electrician will have to come in and make upgrades.



BRX REFRACTOMETER

There are certain tools that a business will need in order to create and maintain a frozen program. Those tools are specific to the type of frozen machines that are being used, but one tool that will pay off for any business is a refractometer.

The amount of sugar in a liquid is measured in degrees of Brix. A refractometer is a measuring tool that does this. Depending on the quantity of sugar present, light bends at a different angle as it passes through a liquid. A refractometer is a tool that looks like a miniature telescope, but once a couple of drops are put on the end of this tool, looking through it will show the exact amount of sugar in a liquid.

NOTE: Refractometers can only be used to measure the concentrations of ONE substance in a solution. A batch with both sugar and alcohol will not give an accurate reading of sugar content alone, since the alcohol content is also impacting the reading.