

## Hydro Extraction

### Continuous Feed • Spinning Disc Reactor • 1200 kg per day

**The Problem:** The conventionally sized CO2 batch reactors for extraction of oil has led to the demand for continuous feed processing system. The problem with big batch reactors, on a industrial scale similar to ones used for decaffeinating tea and coffee beans, is that they are huge, expensive, and take a very long time to build and install. Our system is disruptive technology which turns that legacy system on its side.

**The Solution:** Hydro extraction with water as the solvent. The system is modular, compact, and cost effective. It installs quickly, can be mobile, and can do continuous feed, which allows rapid reconfiguration for using different varieties of botanicals.

**Time is Money:** The new method and equipment are so efficient that the process takes a few seconds, instead of hours or days. The system uses distilled water as the solvent, instead of CO2, butane, or large batch ethanol.

**Other Features:** Our system is also unique in that the continuous flow allows inline filters that automatically remove waxes or other compounds which are not desired in the final concentrate products. This type of continuous flow system is also very energy efficient, because the reaction time is in seconds, not hours or days.

### Hydro Extraction System



The Infinity Supercritical SDR1200 can process 1,200 kilograms of botanicals per day. Dual flow redundancy allows seamless operation.

The **Infinity Supercritical Spinning Disc Reactor** is the best choice for large volume botanical oil extraction. System redundancy and continuous feed, allow for 24/7 processing. Using water as the solvent, the hydro extraction process is eco-friendly. Push-button operation decreases operator error during processing. Full computerized sensors and PLC allow owners to monitor operation remotely from a smart phone. This is the only continuous feed eco-extraction system in the botanicals market.

### Spinning Disc Reactor



The heart of the SDR system utilizes a microjet to split open botanical plant cells.

**Off-the-Shelf Components Used in Water Systems:** Because water is the solvent, the equipment used in the process, is available off-the-shelf. The system uses a large volume of water in a closed-loop process to conserve, and recycle water. Within that system, filters and particulate separators are employed, which are already available and use in various industries. Water management has been around for thousands of years. Using water, we can avoid many of the fire code restrictions that currently exist for butane and ethanol extraction systems. Because CO2 is not used, there is no need for expensive pressure fittings or finding a supply of CO2.

**Modular and Scalable:** Our organic botanical reactor is made from our patented modular blocks which are bolt-together, and can be easily upgraded or scaled up.

**Dual Flow:** Each system has two independent flows, so that one part of the process can be paused temporarily for maintenance. This allows the processor to operate 24/7.

**Push-Button Operation:** The SDR is unique in that once you have the parameters set, the operator only has to turn the system on and monitor (also done by a PLC). This push-button system is unique to the industry, and reduces operator input into the success or failure of the process.

