



LIBERATE THE NUTRITIONAL POWER OF SPENT TEA LEAVES

ANDRITZ Turbex extractor for sustainable valorization

Once discarded as waste, spent tea leaves have now become a valuable resource with immense potential. Rich in bioactive compounds such as polyphenols, proteins and dietary fiber, spent tea leaves offer a sustainable opportunity to create innovative products.

ANDRITZ Turbex, an innovative extraction system, unlocks the full

potential of spent tea leaves, offering two extraction approaches:

- **Sequential extraction:**

- Step 1: Extract polyphenols using a hydroalcoholic solution.
- Step 2: Extract proteins and dietary fiber using alkaline soaking and water extraction.

- **Unique water extraction:**

- Single-Step Process: Extract a phytocomplex containing

polyphenols, proteins, and dietary fiber using water.

By leveraging the ANDRITZ Turbex extractor, you will generate high-quality extracts and benefit from innovative product development to create functional foods, nutraceuticals, and cosmetic products.

Get the most from your spent tea leaves

Generate additional revenue from your by-products

A COMPREHENSIVE SOLUTION FOR YOUR EXTRACTION NEEDS

The ANDRITZ Turbex extractor is available in several configurations to extract substances from spent tea leaves:

- **TURBEX PILOT UNIT:** The Turbex pilot unit is equipped with a soaking/feed unit, a liquid recycling/solid dewatering system, and liquid extract filtration to facilitate the complete extraction cycle, including pre- and post-processing of inlet/outlet streams.
- **TURBEX MOBILE UNIT:** ANDRITZ can provide a skid-mounted rental unit to conduct tests to validate your specific process or simply to allow you to enjoy the benefits of meeting your extraction needs on time. Fully equipped with inlet/outlet pumps, this unit is able to process pre-soaked materials.

TURBEX BENEFITS*

- One-step extraction instead of multiple processes, which reduces solvent costs
- Delivery of the highest quality functional ingredients, active principle elements, and vegetable proteins thanks to low extraction temperatures that avoid oxidation
- Cavitation ensures faster extraction compared to conventional processes, which means more production in less time
- Up to 50% higher yield for better profitability
- Up to 30% less energy consumption compared to traditional processes, leading to a faster return on investment

* Results proven by in-house and on-site tests



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