Yacon tubers have been a distinguished alternative to the obtaining of fructans. To those tubers are ascribed many effects beneficial to man, for fructans are no digested by the upper gastrointestinal tract, stimulating the growth of intestinal bifidobacteria, preventing the elevation of the glucose level in the blood and/or stimulating insulin secretion. It presents also medicinal properties, among them, anti-diabetic, hypo-cholesterolemic and intestinal regulator. So, the yacon tubers appear as an option of great importance, given the functional properties of fructans, minerals and fibers, calling the researchers attention and of the food industries. Before an excellent functional food, there is the need for studies as to cultivation, extraction and quantification of their fructans. This work was designed to evaluate 3 extractors of fructans in 3 sizes of yacon tubers in two days storage at room temperature as well as to compare two quantification techniques. The three extractors can be utilized when fructans will be quantified by HPLC. For spectrometry -quantification, the best extractor is ethanol at 90°C. Medium and small-sized roots presented the highest contents of fructans. Storage influence negatively fructan contents. The HPLC technique was more efficient than colorimetry. As regards the degree of polymerization, all the treatments showed GP in the range of 3-7. That work showed that yacon is an excellent option in fructan-obtaining.