



**TAIYO NIPPON SANSO**  
The Gas Professionals

July 10, 2013

**Taiyo Nippon Sanso to expand capacity for Water-<sup>18</sup>O employing most energy-efficient process**

Tokyo, Japan, July 9, 2013

Taiyo Nippon Sanso Corp. (TNSC) announced a plan to construct its third plant for Water-<sup>18</sup>O, a starting material of diagnostic agents for Positron Emission Tomography (PET), in Yamaguchi, western part of Japan to meet the growing demand. The new plant with annual capacity of 300kg is expected to be operational in early 2015 and upon its completion TNSC will have the world largest annual capacity of 600kg together with the two other existing plants located in Chiba, east of Tokyo. This investment will provide a solid foundation to secure stable supply and operational flexibility commensurate with the long term growth of the PET market.

In early 2000 's TNSC developed a novel <sup>18</sup>O isotope enriching process by cryogenic distillation of ultra pure oxygen that needed only 1/6 of the separation energy compared to conventional water distillation and recently succeeded in improving the energy efficiency by 30% compared to that of its existing plants.

This decision to construct the largest and most modern facility demonstrates TNSC's competitive capability and commitment to the growth of the PET industry.

**About Water-<sup>18</sup>O**

TNSC's Water-<sup>18</sup>O is manufactured in accordance with ISO9001 and cGMP /ICHQ7A and highly valued by customers in more than 20 countries for its reliability and world highest quality in both isotopic and chemical purities.

Since 2003 the first plant has been continuing production of 100kg/year and in 4Q of 2013 the second plant will start the production of 200kg/year. TNSC is the only company who possesses in-house all of the plant technologies (design, engineering, construction, operation) necessary for the manufacture of Water-<sup>18</sup>O. TNSC's patents for the production of Water-<sup>18</sup>O are already granted in Japan, the US and Europe.

### **About PET**

PET is recognized as the most reliable molecular imaging modality in oncology, neurology and cardiology. The PET procedures continue to grow worldwide. Besides  $^{18}\text{F}$ FDG known as the most popular PET agent for cancer detection, a lot of new agents are being developed.

### **About Taiyo Nippon Sanso Corporation - The gas professionals**

TNSC, headquartered in Tokyo, Japan, has been providing stable supply of industrial gases such as oxygen, nitrogen and argon to a wide range of industries, including the steel, chemical, electronics, automobile, construction, shipbuilding, medical and food industries through its worldwide networks since its establishment in 1910.

For further information, please visit the following websites.

**<http://www.tn-sanso.co.jp/en/index.html>**

**<http://stableisotope.tn-sanso.co.jp/english/index.html>**