

Nihon Medi-Physics Launches In-house Production of Molybdenum-99

October 8, 2019, Tokyo, Japan. Nihon Medi-Physics (NMP), the leading radiopharmaceutical company in Japan, announced the in-house production of Molybdenum-99 (^{99}Mo), the critical raw material for Technetium-99m ($^{99\text{m}}\text{Tc}$).



Nuclear medicine scan by Technetium-99m radiopharmaceutical.

NMP launched a project for the in-house production of ^{99}Mo by investing about JPY1.3Bn and plans to start commercial production of ^{99}Mo in 2023. They have developed a new manufacturing process that uses an accelerator instead of a nuclear reactor. It is an environment-friendly procedure without generating nuclear waste.

A stable supply of pharmaceutical products is the most important mission for a pharmaceutical manufacturer. Stable procurement of ^{99}Mo is an essential factor for fulfilling this mission sustainably. Therefore, NMP has been collaborating with the Research Center for Electron Photon Science, Tohoku University, since 2016 to develop a new ^{99}Mo manufacturing process using an electron accelerator. NMP has successfully conquered various issues such as ^{99}Mo quality as a raw material for $^{99\text{m}}\text{Tc}$ radiopharmaceutical products as well as its productivity. NMP has confirmed the suitability of the manufacturing process for commercial production.

$^{99\text{m}}\text{Tc}$ radiopharmaceuticals are major products in the global diagnostic nuclear medicine market, and the demand for ^{99}Mo as a raw material is growing in emerging countries. Together with deteriorating production capabilities due to aging production facilities of existing suppliers, the supply/demand imbalance is forecasted to become more significant, according to a report published by an international organization*¹. In the event of a global ^{99}Mo supply shortage, NMP's project could contribute to overcome the negative impact this would cause to medical care practice within nuclear medicine procedures.

Sources

*1: OECD-NEA NEA/SEN/HLGMR(2018) Report The Supply of Medical Radioisotopes
<https://www.oecd-nea.org/cen/docs/2018/sen-hlgmr2018-3.pdf>

Nihon Medi-Physics Co., Ltd.

Nihon Medi-Physics Co., Ltd. (NMP) is a leading company for radiopharmaceuticals in Japan, engaged in R&D, manufacturing, and distribution. NMP's stable and reliable supply of quality products has contributed to society over the years. With continuous challenges to new business opportunities in the "Development of Theranostics", "Application of digital technology in healthcare", and "Expansion of radiopharmaceutical business in Asia", NMP anticipates to further contribute to the health and well-being of societies into the future.

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