



PCCCMU 4 WEEKS TRAINING COURSE PET RADIOPHARMACEUTICALS PRODUCTION (LONG)

TRAINEE QUALIFICATIONS:

1. Graduated in Pharmacy / Chemistry / Medical physics / Biology / Medicine / Radiological technology / Paramedical science or related fields.
2. Have experience in laboratory work.
3. Good in Thai or English, can speak and understand reasonably well in both conversational and academic language.

NUMBER OF TRAINEE: 1-8

TRAINING PERIOD: 4 weeks / 20 training days / 160 training hours

VENUE: PET/CT & Cyclotron Center Chiang Mai University, Center for Medical Excellence, Faculty of Medicine, Chiang Mai University, Muang, Chiang Mai, 50200 THAILAND

COURSE FEE*: 165,000 THB for one trainee,

90,000 THB for a trainee in case of more than one person.

*PET/CT & Cyclotron Center Chiang Mai University reserves the right to make adjustments to pricing and course contents at any time for reasons including, but not limited to, consumables price fluctuation, personnel availability and equipment performance.

TRAINING ACTIVITIES: Lecture 31 hours, Laboratory practice 129 hours

OBJECTIVES: In the training course, the trainee will be given the opportunities to;

1. Understand the whole process of F-18-FDG, C-11-Methionine and N-13-Ammonia, O-15-Water and I-124-NaI production and Quality Control
2. Practice hands-on synthesis of F-18-FDG with F300E synthesizer, and C-11-Methionine and N-13-Ammonia with CFN-MPS100 synthesizer
3. Perform quality control tests according to international standard
4. Observe the cold production of O-15-Water and I-124-NaI



5. Practice O-18-water purification
6. Experience the concept of Quality Management and relevant regulations, including Radiation protection, Radiation Safety management and Radiopharmaceutical cleanrooms in Cyclotron facility
7. Observe the workflow and administration of F-18-FDG PET/CT for routine clinical examination in the Hospital setting
8. Understand the concept of Clinical applications of PET/CT imaging in oncology, cardiology and neurology, and the novel imaging modalities; PET/CT and SPECT/CT

COURSE CONTENTS

HOUR(S)

Lecture Practice

Introduction to Hospital Cyclotron and Radiation Protection	9	34
<ul style="list-style-type: none">• Radiation safety management in cyclotron unit• Cyclotron structure• Cyclotron operation• Cyclotron targetry• Radionuclide transfer• Clinical applications of PET/CT imaging in oncology, cardiology and neurology• Imaging modalities; PET/CT and SPECT/CT• Quality Management• Production record and documentation		
PET Radiopharmaceuticals production	10	40
<ul style="list-style-type: none">• F-18- FDG, C-11-Methionine and N-13-Ammonia synthesis chemistry• O-15-Water and I-124-NaI synthesis chemistry• Chemicals & equipment preparation• Synthesis module; F300E and CFN-MPS100 SUMITOMO• O-18-water purification		
Quality control testing	6	40
<ul style="list-style-type: none">• Radionuclidic purity• Radiochemical purity• Chemical impurities• Sterility test• Endotoxin test		



GMP requirement for F-18-FDG manufacture	6	15
• Thai GMP (follow the PICS GMP)		
• EU GMP		
• Radiopharmaceutical cleanrooms		
• Trouble shooting and case study		
TOTAL	31	129

TRAINING ASSESSMENT: 80% passing of MCQ test

100% success in practical assignment

For more detail please contact: PCCCMU Radiopharmaceutical production team

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