

## CENTER FOR RADIOISOTOPE FACILITIES



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The Center for Radioisotope Facilities (CRF) provides a well-established and comfortable environment for natural science researchers across Japan as part of the Inter-University Research Institute Corporation. Center staff maintain controlled areas in compliance with relevant laws and monitor the purchase and transfer of radioisotopes (RIs). The following is an outline of the major activities that CRF conducted in 2021.

### 1. Revision of the CRF's rules

The CRF's rules were revised twice in 2021. In April 2021, to respond to the elimination of the seal and signature and the reorganization of the IMS technical organization, the CRF's two rules, the Center for Radioisotope Facilities Myoudaiji District Experimental Facilities Radiation Damage Protection Rules and the Center for Radioisotope Facilities Myoudaiji District Experimental Facilities Radiology Worker Registration Procedure Guide, were revised accordingly. In July 2021, to meet the revision of the Japanese relevant laws, the CRF's rule (Center for Radioisotope Facilities Myoudaiji District Experimental Facilities Radiation Damage Protection Rules) was revised. The main changes include:

- 1) the measurement of exposure doses in the lens of the eyes (from "150mSv per year" to "50mSv per year and 100mSv per 5 years")
- 2) the method of recording radiation dose measurements and calculations

### 2. Renewal of the RI handling management system

The relevant laws require the handling (acceptance, use, dispose and dispensing) of RIs to be recorded. The CRF has used a PC software (the RI handling management system, Aloka ISR1000), but the software is no longer compatible with the current situation. With the approval of the CRF Steering Committee, we renewed the software in March 2022 using budget allocated from NIBB and NIPS.

### 3. Cleaning and checking the radioactive wastewater storage tanks

All wastewater from the CRF is stored in the radioactive wastewater storage tanks. Wastewater is discharged after confirming that the concentration of RIs in the water is below the legal concentration limit. In February 2022, we commissioned contractors to clean and inspect the inside of the tanks. By this checking, the wastewater storage tanks were diagnosed to continue to be usable.

The figures for training courses of RI handling are shown in Table 1. The annual changes of the CRF registrants and the total number of entrances to the CRF per fiscal year are shown in Figure 1. The numbers of the CRF registrants and users from April 2021 to March 2022 are shown in Table 2. During this period the total number of the users and visitors counted by the access control system was 802 (Table 3). The balance of RIs received and used at the CRF is shown in Table 4.

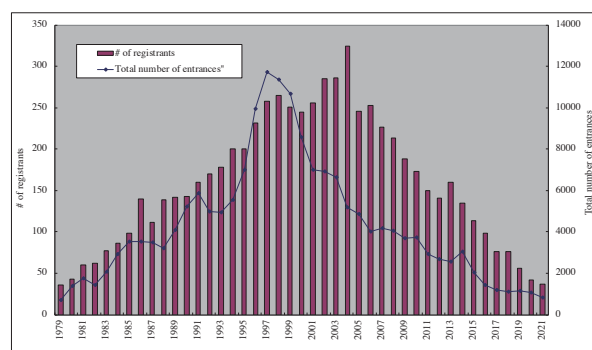


Figure 1. Annual number of the CRF registrants and the total number of entrances to the CRF

Table 1. Training courses offered for radiation workers during fiscal year 2021.

Training course	# of participants
Introductory course for beginners	0
Introductory course for experts	5
Users training course	32
Radioisotope handling practice	1

Table 2. Number of the CRF registrants and users during fiscal year 2021.

Type	The number of persons
# of registrants	37
# of users	16

Table 3. Total number of uses by individual users and visitors during fiscal year 2021.

Type	The number of persons
# of users	688
# of visitors	114

Table 4. RIs received and used (in kBq) during fiscal year 2021.

Nuclide	Situation	Radioactivity
<sup>32</sup> P	Received	59,200
<sup>32</sup> P	Used	46,450
<sup>14</sup> C	Received	18,500
<sup>14</sup> C	Used	23,865
<sup>3</sup> H	Received	0
<sup>3</sup> H	Used	37