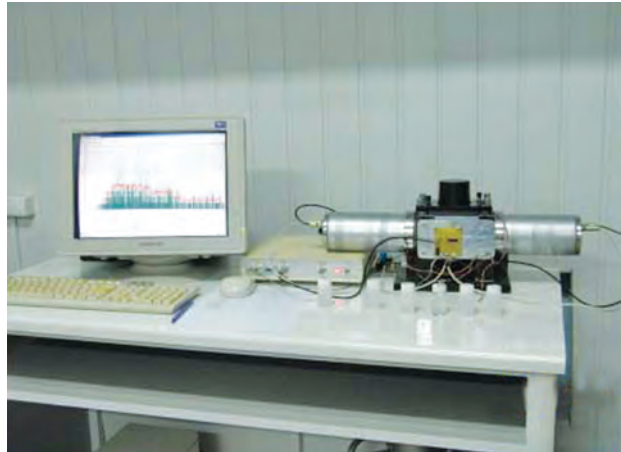


## TRIUMF SYSTEM FOR CONTROL AND MONITORING OF TRITIUM AND CARBON-14 RADIONUCLIDES

### Areas of Application

The system is designed for measuring specific activity of tritium and carbon-14 based on their beta radiation in the environment objects, biological samples or in NPP process environment



### Specification

Efficiency of tritium detection, %	>60
Efficiency of carbon-14 detection, %	>90
Tritium self-background, cpm	<20
Carbon-14 self-background, cpm	<30
Minimal detectable tritium activity, cpm	12
Minimal detectable carbon-14 activity, cpm	8
Sensitivity, Bq/l	1
Irregularity of calibration characteristic per 1 hour of uninterrupted operation, %	≤2
Radiation energy range, eV	5 – 1500
Energy dependence, MeV, ±25%	0.06 – 1.5
Maximal statistical input load, cps	≤10 000

### Stage of Development. Suggestions for Commercialization

IRL3, TRL5  
 Prototype; investment project for joint production; seeking for partners for joint investment project; prototype is provided and tested on the developer's site; search for sales markets in cooperation with investor

### Advantages

Remote measurements and automatic control

### IPR Protection

IPR1

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