

# GSI - Nominal Intensities

This table contains examples of the most frequently requested scenarios. For other ion species, isotopes and charge states, ask your local contact

ion species ion source		UNILAC			SIS18			ESR			Cryring	
		max. rep. rate****	charge state	nominal average particle current	max. rep. rate (fast ext.)	charge state	nominal intensity per cycle @ extraction	charge state	energy / u	stored intensity	charge state	nominal intensity per cycle @ injection
U-238	VARIS				0.5 Hz - 1 Hz	73+	3E+09	91+/92+	300-400 MeV	1E+08		
								91+/92+	40 MeV	4E+07		
									91+/92+	10 MeV	5E+06	91+/92+
Bi-209	VARIS				0.5 Hz - 1 Hz	68+	2E+09					
Pb-208	VARIS				0.5 Hz	67+	3E+09				78+	5E+06
Au-197	VARIS	25 Hz*	26+	0.1 pμA	0.5 Hz - 1 Hz	65+	2E+09				75+	5E+06
Xe-124	MUCIS				0.5 Hz - 1 Hz	48+	4E+09					
Xe-136	MUCIS				0.5 Hz - 1 Hz	48+	5E+08					
Ag-107	VARIS				0.5 Hz - 1 Hz	45+	2E+09				47+	5E+06
Ti-50	PIG	50 Hz	12+	0.8 pμA	0.5 Hz - 1 Hz	22+	2E+08					
Ca-48	ECR	50 Hz	10+	0.8 pμA	0.5 Hz - 1 Hz	20+	5E+08					
Ar-40	MUCIS				0.5 Hz - 1 Hz	18+	4E+10					
Mg-24	Cryring ECR										1+	2E+06
O-18	VARIS		3+		0.5 Hz - 1 Hz	8+	5E+10					
N-14	MUCIS				0.5 Hz - 1 Hz	7+	7E+10					
C-12	ECR	50 Hz	2+	2.4 pμA	0.5 Hz - 1 Hz	6+	4E+09					
	MUCIS (from CH3 molecule***)				0.5 Hz - 1 Hz	6+	2E+10					
	Cryring ECR										1+	2E+06
H-1	MUCIS (from H3 molecule**)				0.5 Hz - 1 Hz	1+	1E+09					
	MUCIS (from CH3 molecule***)				0.5 Hz - 1 Hz	1+	8E+10					

\* 50Hz is possible only with exclusive operation mode

\*\* in parallel operation mode with high MAZ and adopted synchronous phase (higher intensity possible only during exclusive proton operation)

\*\*\* C + H parallel high-current operation from molecule source

\*\*\*\* for A4 operation (11.4 MeV/u), repetition rate is limited to 10 Hz and pulse length to 1 ms

3E+09 positive changes compared to 2022 table

1E+07 negative changes compared to 2022 table

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