

# Materials Database Status

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28/07/2020

# Current assay status

Institution	February 2020 – Now	All
BHSU		3
CARLETON U		4
CIEMAT/LSC	2	26
JAGIELLONIAN U	3	40
LNGS	7	54
MSU		7
PNNL		9
PRINCETON U		2
SNOLAB		7
TEMPLE U		9

If you have results that are not uploaded – contact me ([krzysztof.pelczar@gmail.com](mailto:krzysztof.pelczar@gmail.com))

# Current assay status

Institution	Samples in queues
BHSU	
BOULBY UL	Harwin connectors
CARLETON U	
CIEMAT/LSC	HPGe: <i>Sea sediment</i>
JAGIELLONIAN U	Po extraction: Acrylic (ashing);
LNGS	HPGe: Siltem, polyester tape; ICP-MS: Parylene
MSU	
PNNL	
PRINCETON U	
SNOLAB	Surface Alpha: ESR films; HPGe: <i>Sea sediment</i>
TEMPLE U	HPGe: <i>Sea sediment</i>

# Existing samples requiring further screening

Sample name (ID)	Method	Remarks
Harwin connector (ID 317)	Po extraction, ICP-MS	At Boulby (HPGe), decide after results available
Harwin connector (ID 315)	Po extraction, ICP-MS	
Micro-D connectors, resin (ID 313)	Po extraction, ICP-MS	Await complete connector
Acrylic (multiple samples)	Po extraction, ICP-MS	As soon as ashing is possible
CMOS ASIC for VETO (ID 302)	Po extraction, HPGe	HPGe @LNGS
Electronics (ID 57)	ICP-MS	
Electronics (ID 284)	HPGe for THS4521	LED?
Electronics (ID 285)	ICP-MS for U1104V33 ICP-MS, HPGe for 6TPH47MHA ICP-MS, HPGe for U1C104(5)MA5 (mixture?) Full chain for F381A336MSALZT (tantalum)	
Electronics (ID 286)	ICP-MS for MCT06030C1005FP500	

# Existing samples requiring further screening

Sample name (ID)	Method	Remarks
Gadolinium Oxide	Repeat measurements	Good candidate found
Pyralux PCBs	HPGe	Once assembled
Solder ChipQuik (ID 295)	Po extraction, HPGe	
Solder Indalloy 290 (ID 43)	HPGe	$^{230}\text{Th}$ high ( $^{226}\text{Ra}$ ), Po high
FormLabs resin (ID 283, 296)	Looks clean	Await complete connector
FEP jacket, cable (ID 310, 305, 65)	Po extraction, ICP-MS	
Field cage resistors (ID 291)	Po extraction, ICP-MS	
Indalloy 1E solder (ID 55)	HPGe	
Optical fibers	Full chain	After purchase
Silver loaded epoxy (ID 294)	Po extraction, HPGe	
Solder paste Indalloy #4 (ID 44)	HPGe	

Ensure enough resources and throughput for upcoming screening

# Summary – foreseen screening

Method	Expected # of assays	Remarks
Po extraction	O(10)	
ICP-MS	O(10)	Shared over different sites
HPGe	5 + cross calibration	Small components requiring high sensitivity
HPGe	5 + cross calibration	Bulk material (e.g. solder paste) ordinary screening

## **MDB – remember about the:**

- 1) Queuing sub-system
- 2) Uploading results
- 3) Verifying sample status (shipped/in assay/done)
- 4) ... or contact me ([krzysztof.pelczar@gmail.com](mailto:krzysztof.pelczar@gmail.com))

**Send some of the new samples to idling labs to confirm readiness**

Ensure enough resources and throughput for upcoming screening