

## Technical Definition

### Chemical analysis on Inconel 718

You shall respect the HSE policy of your laboratory for each performed test.

**Please read these instructions carefully BEFORE starting the tests.**

1. One blank ( $\emptyset$  50 x 20 mm) is supplied to each participant. Laboratory shall submit a report for each accredited element and accredited method provided.

In case of :

- loss or deterioration of PTP sample(s) please contact your sponsor for a replacement kit.
- A decision to exclude the results of one of the samples, you shall provide a short root cause analysis to explain.

2. For each method, the laboratory shall report **one value** according to its usual process. The laboratory shall also indicate how many analyses were performed to obtain this result.

- One technician shall perform all analyses.

3. Each participant is required to report the following elements to the indicated precision regardless of their normal practice. **The elements below the quantified detection limit shall not be reported.**

Element	Symbol	Precision (%)
Silver	Ag	X,XXXXX
Aluminium	Al	X,XXX
Boron	B	X,XXXX
Bismuth	Bi	X,XXXXXX
Carbon	C	X,XXXX
Cobalt	Co	X,XXXX
Chromium	Cr	X,XXX
Copper	Cu	X,XXXX
Iron	Fe	X,XXX
Magnesium	Mg	X,XXXXX
Manganese	Mn	X,XXXX
Molybdenum	Mo	X,XXX
Nitrogen	N	X,XXXX
Niobium	Nb	X,XXX
Nickel	Ni	X,XX
Oxygen	O	X,XXXX
Phosphorus	P	X,XXXX
Lead	Pb	X,XXXXX
Sulfur	S	X,XXXX
Selenium	Se	X,XXXXX
Silicon	Si	X,XXXX
Tin	Sn	X,XXXXX
Titanium	Ti	X,XXX

All evaluated characteristics will be analysed according to the algorithm A (ISO 13528 – 2015) and evaluated using z-score. **The results will be taken into account for the analysis only if the element and the method are within the accreditation scope of the laboratory.**

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4. Each element shall be reported in Percent Concentration, to the precision (the number of significant digits) indicated.

The provided results shall be within the analytical range of the laboratory. If a laboratory is not able to provide results with the required precision, **the values shall not be reported.**

Non-quantified elements, such as “less than”, “not detected,” etc., shall not be reported.

Elements shall not be reported in PPM or any other unit of measurement than Percent Concentration.

5. Testing shall start **as soon as test specimens are received**. Please contact the following e-mail address for any technical or administrative query.

<b>Submission date :</b>	<b>June 1<sup>st</sup>, 2020</b>
<b>Technical and administrative support :</b>	<a href="mailto:info@ptpscheme.com">info@ptpscheme.com</a>

6. Instructions for submission of results are detailed on the website:

<https://ptpscheme.com>

7. To ensure the confidential treatment of your results in the final report, you will be allocated a unique identity number when you register for the program.
8. Collusion and falsification of your PTP results are totally forbidden. In case of identification or suspicion of collusion or falsification, the laboratory will be excluded from the program and the sponsors will be immediately informed. The sponsors could ask you proofs of your records and analyses, so be sure to conserve data, curves and specimens.

APPENDIX: Instructions for IRR participation

The Internal Round Robin participation (IRR) is **optional** and **independent** from your PTP participation.

Confidentiality: The IRR results and reports are confidential and only accessible by your laboratory. They are not shared with the scheme sponsors or any other accreditation or certification bodies.

The extra samples shall be tested according to the following table:

	Operator 1	Operator 2	Operator 3	Operator 4	Operator X
<b>Test machine 1</b>	PTP kit (1 sample)	1 sample	1 sample	1 sample	1 sample
<b>Test machine 2</b>	1 sample				
<b>Test machine 3</b>	1 sample				
<b>Test machine Y</b>	1 sample				

**Operator 1** (OP1) is to be the most experienced operator currently conducting tests on a regular basis and shall perform tests on all machines (TM1, TM2, TM3...)

**Test Machine 1** (TM 1) is to be the most utilised machine for this test in your laboratory and shall be tested by all operators (OP1, OP2, OP3...)

Example: A laboratory has 2 operators and 3 test machines. They receive a PTP kit and 3 extra specimens.

Operator 1 shall test the PTP kit on TM1, 1 specimen on TM2 and 1 specimen on TM3.

Operator 2 shall test 1 specimen on TM1.

The IRR results have to be submitted on a separate results form available on the PTP website.

The identification of operators and test machines you provide will appear on the IRR final report.

These identifications will not be seen by other laboratories.

The IRR results will be classified against the acceptance classes of the kit 8-2-2020.

**Reminder: Laboratories are not permitted to switch specimens between the PTP kit and IRR samples. The traceability of the samples will be checked during the evaluation. Laboratories found to have switched samples will invalidate their PTP participation.**

REVISION HISTORY

Issue Date	Issue N°	Changes
06/01/2020	1	Document creation
12/03/2020	2	Modification of the expected results precision
20/03/2020	3	Modification of the results submission deadline