


|   |                              |  |                                    |
|---|------------------------------|--|------------------------------------|
| <br><small>THE TEMPERATURE CONTROL COMPANY</small> | <h1>Working Instruction</h1> | Department<br>abbreviation<br>sequential No.<br>AA-RD-019-EN | Version – Month/Year<br>V3 – 11/15 |
| <h2>Initial Sample Test Report</h2>   |                              |  |                                    |

### 1. Objective / Purpose

This working instruction is intended to serve as guideline to assist the smooth handling of the initial sample process for components. Objective of the initial sampling process is to determine if all design records and specification documents have been completely understood by the supplier and if the production is able to manufacture parts which fulfill these requirements during the actual production (series production) with the pre-determined production quantity.

The supplier is responsible for the execution and correctness of the test and measurement results of the sample test. The purchaser reserves the right of cross-checking.

### 2. Scope

This guideline applies to all suppliers (internal and external) of parts which are manufactured according to the specifications of JULABO GmbH.

### 3. Abbreviations

See Intranet → Organization → contacts/codes/abbreviations → list of internal abbreviations

### 4. Terms and definitions

#### **First sample**

First samples are products which were manufactured with standard equipment under standard conditions. Sampling with initial samples is called initial sample test. Sampling for the release of production processes and products must be performed with initial samples. A positive or negative assessment of the initial sample (incl. documentation) by the purchaser results in the release or rejection of the delivered product.

#### **Pre-serial sample**

Pre-serial samples are manufactured with tools for small series or near-series systems which guarantee manufacturing process reliability. The applied manufacturing method corresponds with the subsequent serial production. To safe-guard the series start-up phase the products can be installed in pre-series products both with regard to their quality and produced numbers and are therefore suited for sampling.

#### **Other samples**

Other samples (DIN 55350, part 15) are products and material which are manufactured under not entirely serial conditions. Other samples may not be used for initial sample release. The release of other samples is not equivalent to serial release and does not give reason to waive the initial sample release procedure.

|                                | Name                  | Date  | Signature            |
|--------------------------------|-----------------------|---|----------------------|
| Responsible for procedure:     | Marco Bertiller       | 30.10.2015  | Patrick Walter       |
| Reviewed:                      | Patrick Walter        | 02.11.2015  | Benjamin Lohrer      |
| Issued by:                     | Patrick Walter        | Amendment since last version (red)  |                      |
| Distribution:                  | Intranet and Homepage | Screenshots adjusted<br>Scope of random samples adjusted<br>Overall EMPB decision and future incoming inspection adjusted<br>Overall status adjusted<br>Definition of features for scope of sampling process adjusted |                      |
| Document name:                 |                       | Template issued by  | Revision of template |
| FB-QM-003-ISO Arbeitsanweisung |                       | D. Oldak  | V1                   |
|                                |                       | Date of template  | Page                 |
|                                |                       | 10.07.2013  | 1 / 11               |

## 5. Applicable Documents

- Conditions of purchase for production material, spare parts and direct manufacturing equipment for our products
- Quality and environmental standards demanded from suppliers
- Production creation process VA-RD-003
- Form: Initial Sample Test Report

## 6. Amendments

This work instruction is reviewed regularly by the responsible person and amended as necessary.

## 7. Instruction

*All areas / departments / groups listed at item 2 are to be instructed on new and/or amended procedures.*

## 8. Description

### Sequence

The supplier carries out all necessary tasks for the sampling on the basis of the established criteria, characteristics, and documentation.

The supplier checks the completeness and the fulfillment of the specifications, creates and signs the release forms. The supplier forwards the initial samples incl. the required documentation to the purchaser on schedule. If deviations regarding completeness and fulfillment of tasks occur in the course of the release procedure, the cause has to be determined and corresponding, corrective measures are to be initiated. The purchaser has to be informed.

The purchase evaluates the transmitted or presented documents and samples. The single and total release status is added to the cover page of the report. The release status is communicated to the supplier on the cover page.

### Quantity of random samples:

| Product                          | Quantity of random samples | Comments  |
|----------------------------------|----------------------------|---|
| Sheet metal structural component | 3 pieces                   |   |
| All others                       | 5 pieces                   | Depending on the product, smaller quantities of random samples may also be agreed between the purchasing department and the quality management department |
| Injection molding parts          | 25 pieces                  |   |

The total status can be:

1. Released
2. **Approved with conditions / drawing adjustment required**
3. Released subject to conditions, re-sampling required
4. Rejected, re-sampling required

| Decision JULABO                                      | Total                    |                          |                          |                          |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
|  |                          | 01                       | 02                       | 03                       |
| Released   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Released subject to conditions, re-sampling required | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Rejected, re-sampling required                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Image 1: Total release status

### When are initial samples required?

Initial samples are requested on principle together with the order and specified date for:

- New parts and new components (also for sample parts and sample components)
- Product changes (e.g. changes of construction, specifications, raw material)
- Change of suppliers

**Caution:** For structural components evidence must also be produced for all sub-assemblies and individual parts when not assembled. This applies even if only the structural component has been ordered. The supplier is always obliged to obtain the approval from the relevant dispatcher promptly from:

- Re-sampling
- Re-location of production
- Change of production process
- Change of suppliers of products or services
- Change of purchased parts
- After reconstruction and maintenance of molds

### Labeling of initial samples

The initial sample is to be labeled with:

- Part number
- Description
- Drawing number
- Index

It is important that it is possible to clearly assign the initial sample to the entire initial sample documentation including the measurement reports to guarantee a 100% retraceability and consistency of results and processes.



## The forms

The grey shaded fields are filled in by the purchaser. While filing the order, the purchaser defines the tests (function test, measurement check, ...) demanded from the supplier on the cover sheet.

|                     |  |
|---------------------|--|
| Eisenbahnstrasse 45 |  |
| 77960 Seelbach      |  |

| Document             | Demanded                            | Che |
|----------------------|-------------------------------------|-----|
| 01 Functional test   | <input checked="" type="checkbox"/> |     |
| 02 Dimensional check | <input checked="" type="checkbox"/> |     |

Image 3: requirements

The supplier fills in the basic information on the cover sheet. This includes:

### Sender/supplier

| Sender/Supplier         |  |
|-------------------------|--|
| Name supplier           |  |
| Name person             |  |
| Name of works           |  |
| Street or P.O.B.        |  |
| Country, Zip code, city |  |

Image 4: sender

Name supplier: *external:* [full company name] *internal:* [production department]  
 Name person: [contact / responsible person]  
 Works name: [manufacturing site and works]  
 Street or POB: only *external:* [street or POB]  
 Country, ZIP; city: only *external:* [address]

### Reason for report

**Initial Sample**  
**Test Report (EMPB)**

☒ Report for release of production process and product

☐ Sampling

- ☐ New Part
- ☐ Modification of product (modification of specification)
- ☐ Relocation of production
- ☐ Modification of product (modification of specification)
- ☐ Suspension of production for more than 12 months
- ☐ Modification/correction of tools
- ☐ Change of purchased parts
- ☐ Change of supplier
- ☐ Others

☐ Additional sampling

☐ Re-sampling

☐ Report any other sample

Image 5: reason for Initial Sample Test Report

## Sampling information

| Checked                  | Status/Date | Type, extent, and designation of unit |
|--------------------------|-------------|---------------------------------------|
| <input type="checkbox"/> |             |                                       |

Image 6: Information

Status of test, state/date, type, extent and description of system.

## Confirmation of sampling

**Confirmation supplier/tester:** It is hereby confirmed that sampling was executed conscientiously and acc. to the state of technology.

|             |  |                           |             |
|-------------|--|---------------------------|-------------|
| Name:       |  | Description:              |             |
| Department: |  | Drawing number - index;   |             |
| Phone/Fax   |  | Status/Date:              | Change No.: |
| E-mail:     |  | Delivery/sample quantity: |             |
| Date:       |  | Signature/Stamp           |             |

Image 7: confirmation of sampling

## Decision

| Decision JULABO                                      | Total                    | Individual releases      |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                               |                          |                          |                          |                          |                          |                          |                          |                          |  |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--|
|  |                          | 01                       | 02                       | 03                       | 04                       | 05                       | 06                       | 07                       | 08                       | 09                       | 10                       | 11                       | 12                       | 13                       | 14                       | 15                       | 16                            | 17                       | 18                       | 19                       | 20                       | 21                       | 22                       | 23                       | 24                       |  |
| Released   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |  |
| Released subject to conditions, re-sampling required | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |  |
| Rejected, re-sampling required                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |  |
| Fixed incoming goods inspection (IQI)                |                          | <input type="checkbox"/> | Commercial IQI           |                          |                          |                          |                          |                          | <input type="checkbox"/> | Technical IQI            |                          |                          |                          |                          |                          | <input type="checkbox"/> | Stored in folder: G:\WEK\EMPB |                          |                          |                          |                          |                          |                          |                          |                          |  |
| Name:  |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          | Goods receipt No./date:  |                          |                          |                          |                          |                          |                               |                          |                          |                          |                          |                          |                          |                          |                          |  |
| Department:  |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          | Order call-off No./date: |                          |                          |                          |                          |                          |                               |                          |                          |                          |                          |                          |                          |                          |                          |  |
| Phone/Fax  |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          | Remarks:                 |                          |                          |                          |                          |                          |                               |                          |                          |                          |                          |                          |                          |                          |                          |  |
| E-mail:  |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                               |                          |                          |                          |                          |                          |                          |                          |                          |  |
| Date:  |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          | Signature:               |                          |                          |                          |                          |                          |                               |                          |                          |                          |                          |                          |                          |                          |                          |  |

Image 8: Evaluation matrix

The individual and overall decision and the definition of the future incoming inspection are the responsibility of the design department and the receiving department at JULABO GMBH. The required information should also be provided in full to the decision-maker.

## Functional test

[illegible]

Image 9: Form for functional test

If a functional test is required, the supplier has to enter the defined functional characteristics on the form "functional test". He defines the test equipment and enters the result in the column "Actual value supplier". In case of fulfillment, he ticks the box "fulfilled". In case of nonfulfillment, the box is not ticked and the reasons as well as possible corrective measures are entered in the box "Remarks". If there is not enough space, refer to attached supplementary sheets

| Ref.-<br>No. | Requirements |                   | Supplier                  |                           |                           |                           |                           | Julabo                  |
|--------------|--------------|-------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|-------------------------|
|              | Requirement  | Test<br>Equipment | ACTUAL<br>value<br>Part 1 | ACTUAL<br>value<br>Part 2 | ACTUAL<br>value<br>Part 3 | ACTUAL<br>value<br>Part 4 | ACTUAL<br>value Part<br>5 | Value<br>contr.<br>Part |

Image 10: Requirements

Name and address, ... need to be supplemented

Cross-checks are applied at random by the purchaser, who will enter his results in the column "Actual value JULABO". In case of nonfulfillment, the purchaser will choose one of the two possible decisions. Adaption of drawing is chosen if all random samples of a characteristic are within the tolerance after the adaption. Re-sampling is chosen if the measurements – even after the adaption of the drawing – do not fulfill the requirements and/or an adaption is not possible. If the correction of a component is necessary, re-sampling is required.

| A dapt<br>drawing        | Re-sample                | Test dim.                |
|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Image 11: Specific decision

Functions which have been defined as test criteria for the incoming goods inspection must be ticked in the box "test criteria for RQM". The Incoming Goods Control will store the information in the RQM system and will use it as reference as soon as the serial production has started.

| fulfilled                | A dapt<br>drawing        | Re-sample                | Test<br>criteria for<br>RQM |
|--------------------------|--------------------------|--------------------------|-----------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>    |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>    |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>    |

Image 12: RQM entry

Subsequently the decision is defined by the purchaser and confirmed with his name and signature.

| Decision JULABO                        |                          |
|--|--------------------------|
| released                               | <input type="checkbox"/> |
| released, adaption of drawing required | <input type="checkbox"/> |
| rejected, re-sampling required         | <input type="checkbox"/> |
| Name:                                  |                          |
| Department:                            |                          |
| Phone:                                 |                          |
| e-mail:                                |                          |
| Date:                                  | Signature:               |

Image 13: decision matrix

The decision released, adaption of drawing required can only be made if all results of random samples will then comply with the requirements.





| Ref.-<br>No. | Requirements           |                 |                |                |              |              | Supplier                 |                          |                          |                          |                          | O                      | fulfilled | Adapt<br>drawing | Re-sample | Test dim.<br>For RQM<br>system |
|--------------|------------------------|-----------------|----------------|----------------|--------------|--------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------------------------|-----------|------------------|-----------|--------------------------------|
|              | Quadrant<br>on drawing | Nominal<br>size | upper<br>tol.: | lower<br>tol.: | Max.<br>dim. | Min.<br>dim. | ACTUAL<br>size part<br>1 | ACTUAL<br>size part<br>2 | ACTUAL<br>size part<br>3 | ACTUAL<br>size part<br>4 | ACTUAL<br>size part<br>5 | Size<br>contr.<br>Part |           |                  |           |                                |

Image 16: Results

Cross-checks are applied at random by the purchaser, who will enter his results in the column "Actual value JULABO". In case of nonfulfillment, the purchaser will choose one of the two possible decisions. Adaption of drawing is chosen if all random samples of a characteristic are within the tolerance after the adaption. Re-sampling is chosen if the measurements – even after the adaption of the drawing – do not fulfill the requirements and/or an adaption is not possible. If the correction of a component is necessary, re-sampling is required

| Adapt<br>drawing         | Re-sample                | Test dim.                |
|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Image 17: Detail decision

Dimensions or properties, which are defined as inspection criteria for the incoming inspection, must be crossed in the box headed "Inspection criterion for RQM". These are defined together by the designer and the WEK personnel on the basis of the component function and empirical values. These are then placed in the RQM system by WEK and used for future series deliveries.

| drawing                  | Re-sample                | Test dim.<br>For RQM<br>system |
|--------------------------|--------------------------|--------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>       |

Image 18: RQM entry

Subsequently the decision is defined by the purchaser and confirmed with his name and signature.

|  |                          |
|--|--------------------------|
| <b>Decision JULABO</b>                 |                          |
| released                               | <input type="checkbox"/> |
| released, adaption of drawing required | <input type="checkbox"/> |
| rejected, re-sampling required         | <input type="checkbox"/> |
| Name:                                  |                          |
| Department:                            |                          |
| Phone:                                 |                          |
| e-mail:                                |                          |
| Date:                                  | Signature:               |

Image 19: Decision matrix

| Dokumenten-Name                | Ersteller<br>der Vorlage | Revision<br>der Vorlage | Datum<br>der Vorlage | Seite   |
|--------------------------------|--------------------------|-------------------------|----------------------|---------|
| FB-QM-003-ISO Arbeitsanweisung | D. Oldak                 | V1                      | 10.07.2013           | 10 / 11 |

## Notes on testing and measurement accuracy of the equipment used

The necessary accuracy depends on the application and/or specification of the parts. It must be possible to measure all measuring and test characteristics with a justifiable accuracy taking all influences (equipment-specific/not equipment-specific) into consideration. The following standard applies: The margin of error of the measuring and testing equipment should not exceed 10% of the minimum permissible tolerance of the measurement and test characteristics.

Example: minimum permissible tolerance:  $\pm 0.3$  mm -> minimum accuracy of measuring and testing equipment is 0.06 mm. The control of the measuring equipment in development and production is a prerequisite for the necessary trust in the accuracy and precision of measuring results and the resulting decision. The proof of accuracy as well as the regular control of the measuring and testing equipment has to be rendered by the supplier at the demand of the purchaser.

## The release

The release of the samples by the purchases does not release the supplier from his responsibility for the quality of his products. Nor is it a delivery order. Submitted sampling documents which are not complete are automatically considered "Released subject to conditions".

| Decision                      | Details   |
|-------------------------------|---|
| Release                       | Complete release means that the part or material has fulfilled all customer's specifications and requirements. The order documentation is complete also. Therefore the supplier is authorized to deliver production quantities of the part according to the release of the purchaser.   |
| Release subject to conditions | Release subject to conditions permits delivery for a limited time or quantity. The lot is accepted under the condition of further processing without any problems. A limited release is granted only if the supplier <ul style="list-style-type: none"> <li>1) Has clearly defined the root cause for the deviation which prevented release.</li> <li>2) Has set up an "action plan" for limited release in agreement with the purchaser.</li> <li>3) A part subject to limited release which has not complied with the action plan either in regard to the number of parts or the permitted quantity is rejected. Further deliveries are not permitted unless an extension of the limited release has been granted.</li> </ul> |
| Rejection                     | Rejected means that the sample, the corresponding production batch, or the appropriate documentation has not fulfilled the customer's requirements. An improved product and a revised documentation must be submitted and require release prior to delivery of further production quantities.   |