
International Standard



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Time measurement instruments — Conditions for carrying out checks on radioluminescent deposits

Instruments horaires — Conditions d'exécution des contrôles des dépôts radioluminescents

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FOREWORD

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 4168 was developed by Technical Committee ISO/TC 114, *Horology*, and was circulated to the member bodies in April 1978.

It has been approved by the member bodies of the following countries :

Czechoslovakia	Italy	Switzerland
France	Japan	United Kingdom
Germany, F.R.	Korea, Rep. of	USSR
India	Mexico	
Ireland	South Africa, Rep. of	

No member body expressed disapproval of the document.

Time measurement instruments — Conditions for carrying out checks on radioluminescent deposits

1 SCOPE AND FIELD OF APPLICATION

This International Standard defines the conditions in which checks on radioluminescent deposits for time measurement instruments are to be carried out.

It supplements ISO 3157, in particular clause 5 of that document, "Specifications and test methods for radioluminescent deposits".

2 REFERENCES

ISO 2859, *Sampling procedures and tables for inspection by attributes*.

ISO 3157, *Radioluminescence for time measurement instruments — Specifications*.

3 CARRYING OUT CHECKS

All radioluminescent deposits shall be capable of successfully withstanding the tests specified in clause 5 of ISO 3157 carried out in the following conditions :

3.1 Checking of the colours, the specific luminous intensity and resistance to ageing

The colours, the specific luminous intensity and the resistance to ageing shall be checked on five standard deposits as defined in clause 5c) of ISO 3157, for each production batch of radioluminescent substance and each time the nature of the binder is altered.

These checks are the responsibility of the manufacturer of the radioluminescent substance.

If a user applies the radioluminescent substance in conditions which differ from those defined by the manufacturer of this substance (proportion and nature of the binder), the checks are the responsibility of such a user.

3.2 Checking of adhesion

The adhesion shall be checked :

3.2.1 For each production batch of radioluminescent substance and for each production batch of binder, on five standard supports.

The checks are the responsibility of the manufacturer of the radioluminescent substance.

3.2.2 For each new support or new deposit¹⁾ which has not undergone testing by the user concerned, on at least five pieces.

These checks are the responsibility of the user of the radioluminescent substance.

3.2.3 For each production batch of dials or hands or any part bearing a radioluminescent deposit, on a representative sample ensuring an acceptable quality level (AQL) of 1 %, under the standard inspection conditions defined in ISO 2859.

These checks are the responsibility of the user of the radioluminescent substance.

3.3 Checking of the insolubility

The insolubility shall be checked :

3.3.1 For each production batch of radioluminescent substance and for each production batch of binder, on the standard supports used for the checking of adhesion as defined in 3.2.1.

These checks are the responsibility of the manufacturer of the radioluminescent substance.

1) For the purpose of this International Standard, these terms have the following meanings :

- **new support** : Any part (hand, dial, bezel) which, owing to the nature of the materials and the treatments of the surface, is outside the previous experience of the user of the radioluminescent substance.
- **new deposit** : Any deposit of radioluminescent substance which, owing to its shape or dimensions, is outside the previous experience of the user of the radioluminescent substance.

3.3.2 On the new supports which were used for the checking of adhesion as defined in 3.2.2 when the new element concerns the support material or the surface treatment of the support.

These checks are the responsibility of the user of the radioluminescent substance.

4 CERTIFICATE OF CONFORMITY

4.1 The manufacturer of the radioluminescent substance shall be required, at the request of the customer, to furnish a certificate with each delivery, indicating the production batch numbers, and stating the characteristics defined in sub-clauses 5.1 and 5.2 of ISO 3157 for one or more types of binder and for one or more proportions of mixture, and

conformity of the product with the specifications in 5.3, 5.4 and 5.5 of ISO 3157.

4.2 The user of the radioluminescent substance shall be required, at the request of the customer, to furnish a certificate with each delivery of hands or dials, guaranteeing, firstly, use of a radioluminescent substance complying with the specifications of ISO 3157 and, secondly, conformity with the specifications in 5.4 and 5.5 of ISO 3157.

4.3 Both the manufacturer and the user of the radioluminescent substance shall be required, with due regard to national regulations applying to prescribed time limits, to file the reports on checks carried out on their production, as well as the duplicate copies of certificates accompanying deliveries, and to produce them on demand.

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