

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION

R 511

STANDARD FOR WHITE LEAD

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PIGMENTS FOR PAINTS — WHITE LEAD FOR PAINTS

1. SCOPE AND FIELD OF APPLICATION

This International Standard specifies the requirements and the methods of test corresponding for white lead for paints. Pigment

2. REFERENCES

Paints and varnishes —

ISO 787, General methods of test for pigments

ISO 842, Sampling raw materials for paints and varnishes

3. DEFINITION

White lead: A white pigment which consists of basic lead carbonate with a composition varying between the limits mentioned in section 4.

4. REQUIRED CHARACTERISTICS AND THEIR TOLERANCES

White lead should have the following characteristics: — in the table below
Contents m/m

Characteristic	Requirement	Test method
Lead carbonate content	64 to 80 % (m/m)	6.1
Lead hydroxide content	19 to 35 % (m/m)	6.4
Sum of lead carbonate and lead hydroxide/min.	99 % (m/m)	6.5
Matter volatile at 105 °C, max.	0,5 % (m/m)	ISO 787 Part II
Matter soluble in water, max.	0,5 % (m/m)	ISO 787 Part III
Alkalinity of aqueous extract, max.	0,2 ml of 0,1 N acid solution per gramme	ISO 787 Part IV
Residue on sieve, max.	0,5 % (m/m)	ISO 787 Part VI or VII
Colour	Equal to the agreed reference sample	ISO 787 Part I
Lightening power	As agreed between purchaser and vendor in the interested parties	ISO 787 Part VII
Hiding power		To be agreed between parties
Oil absorption value		ISO 787 Part VIII

to the interested

1) For painting building interiors the White Lead (Painting) Convention, 1921 (No. 13) of the International Labour Organization prohibits the use of white lead and of all products containing it, except where the use of white lead is considered necessary for railway stations or industrial establishments by the competent authority, after consultation with the employers' and workers' organizations concerned.

2) All percentages are calculated from the original sample.

3) Two alternative methods for determination of residue on sieve are recommended in ISO 787, identified respectively as the "oil method" and the "water method". Both methods are acceptable for the purpose of this ISO recommendation but it is recommended that the method to be used in a particular case should be specified in the contract or otherwise agreed between the interested parties and should in any case be mentioned in the test report.

Documents

Texte sur 2 colonnes

5. SAMPLING

- 5.1 A representative sample of the pigment should be taken in accordance with ISO *Sampling raw materials for paints and varnishes*. 8420
- 5.2 The sample agreed between ^{the interested parties,} purchaser and vendor, to which reference is made in the ^{shall} Table, should comply with all the requirements specified for the pigment under test. 2. Labors

6. METHODS OF TEST

(C8) NOTE — All reagents used ^{shall} be of recognized analytical reagent quality. Distilled water or water of at least ^{equivalent} equal purity should be used.

6.1 Determination of lead carbonate (PbCO_3) content

The determination of ^{the} lead carbonate content is derived from the determination of carbon dioxide (CO_2) content.

6.1.1 Reagents

6.1.1.1 Nitric acid, 4 M. addition

6.1.1.2 Sulphuric acid, 96% (m/m), $\rho_{20}^4 = 1,84 \text{ g/ml}$ addition

6.1.1.3 Potassium hydroxide, 33% (m/m) solution. Dissolve 50 g of potassium hydroxide in 100 ml of water.

6.1.1.4 Magnesium perchlorate, anhydrous. L. normal

6.1.1.5 Indicating soda lime or soda asbestos.

6.1.2 Apparatus

bon Use the apparatus ^{shown in the figure below} for the determination of carbon dioxide (CO_2) ^{shall be prepared} shown in the figure ^{shall be prepared} below.

Before making a determination, ^{shall be prepared} prepare the apparatus by slowly aspirating air and ^{shall be prepared} perform a blank test, without any sample, following the procedure given in ^{shall be prepared} ~~figure~~ 6.1.3. The apparatus should be regarded as satisfactory, only if less than 1 mg of carbon dioxide is obtained, when the blank test is carried out.

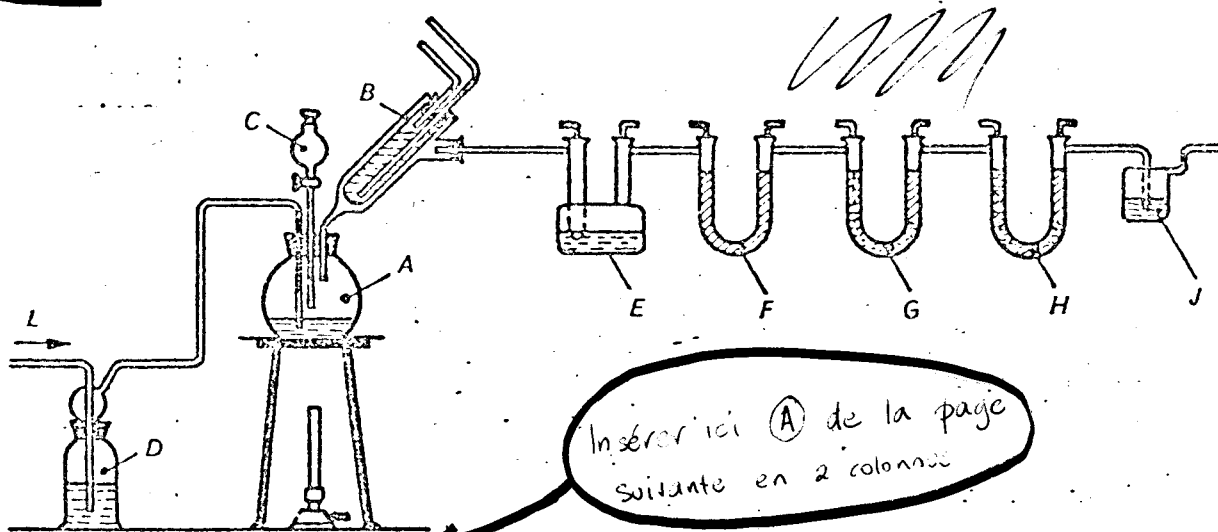


FIGURE — Apparatus for the determination of the percentage of carbon dioxide (CO_2)

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