Possessed permissions:

Scope of accreditation of research laboratory No AB 120 issued by Polish Centre for Accreditation.

Issue No. 22 of 30 June 2023.

Head of the laboratory

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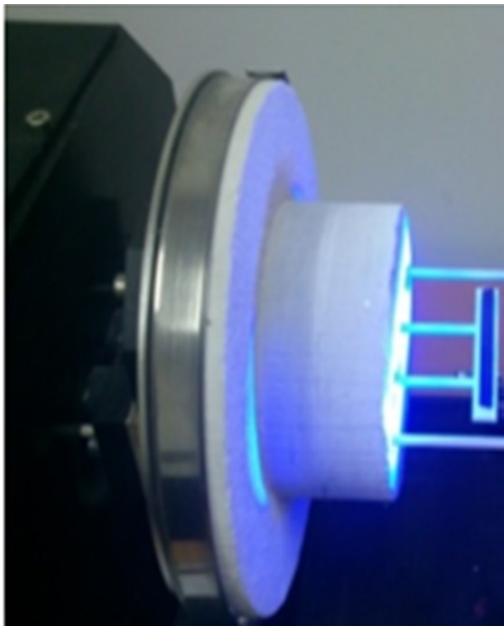
The Laboratory specializes in physicochemical studies, which include measurements of thermal expansion of solid and sintered materials, and also in hydrogen absorption and desorption measurements in solid-state samples.

Dilatometric measurements

Procedure no. P/19/IB-21: Dilatometric measurement of solid and sintered materials.
Research aparatus: Optical dilatometer Misura® 3 FLEX-ODLT.

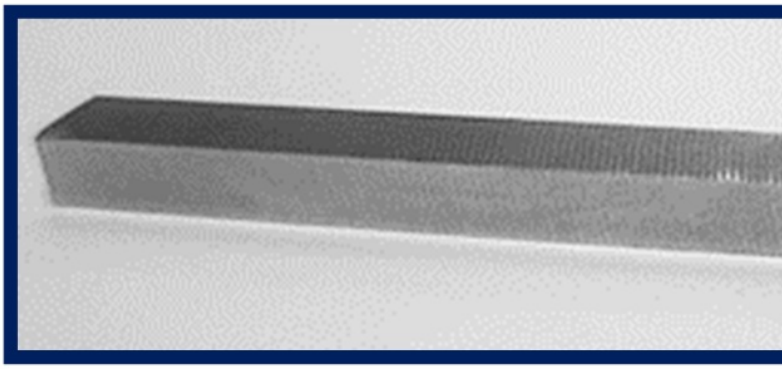
Procedure

Dilatometric measurement of solid and sintered materials (procedure no. P/19/IB-21)
Hydrogen sorption in solid materials (procedure no. P/19/IB-22)

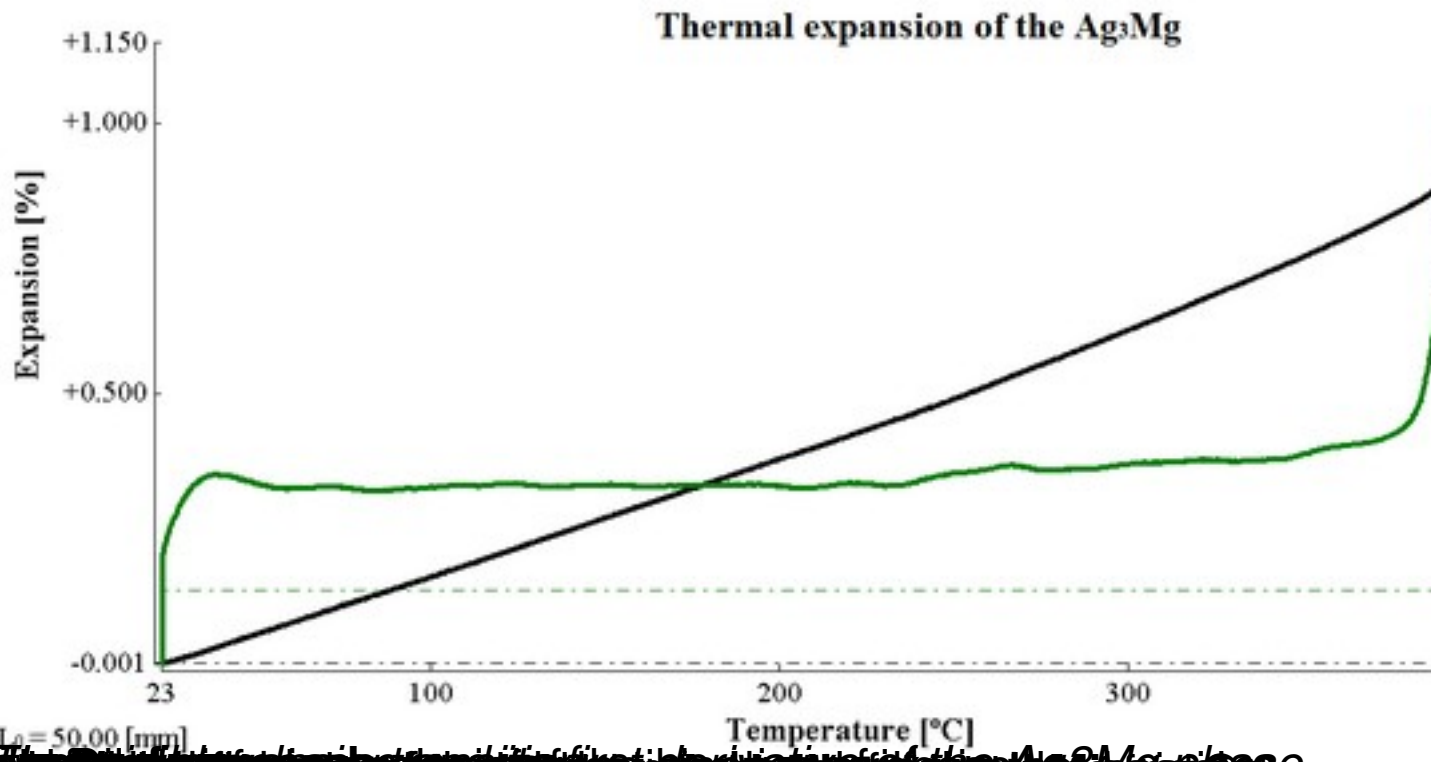


The Misura® 3 FLEX-ODLT optical dilatometer is designed to perform non-contact thermal expansion measurements of various materials with very high accuracy. This apparatus is equipped with two high-resolution monochromatic cameras (iCube from NET GmbH), which precisely record the changes occurring on the sample edge with an increasing temperature of measurement. The thermocouple and thermal expansion value are calibrated over an accredited temperature range (20-507 ºC) with the use of the Certified Reference Material "Standard Reference Material 738 Stainless Steel, AISI 446", from the National Institute of Standards and Technology (NIST,

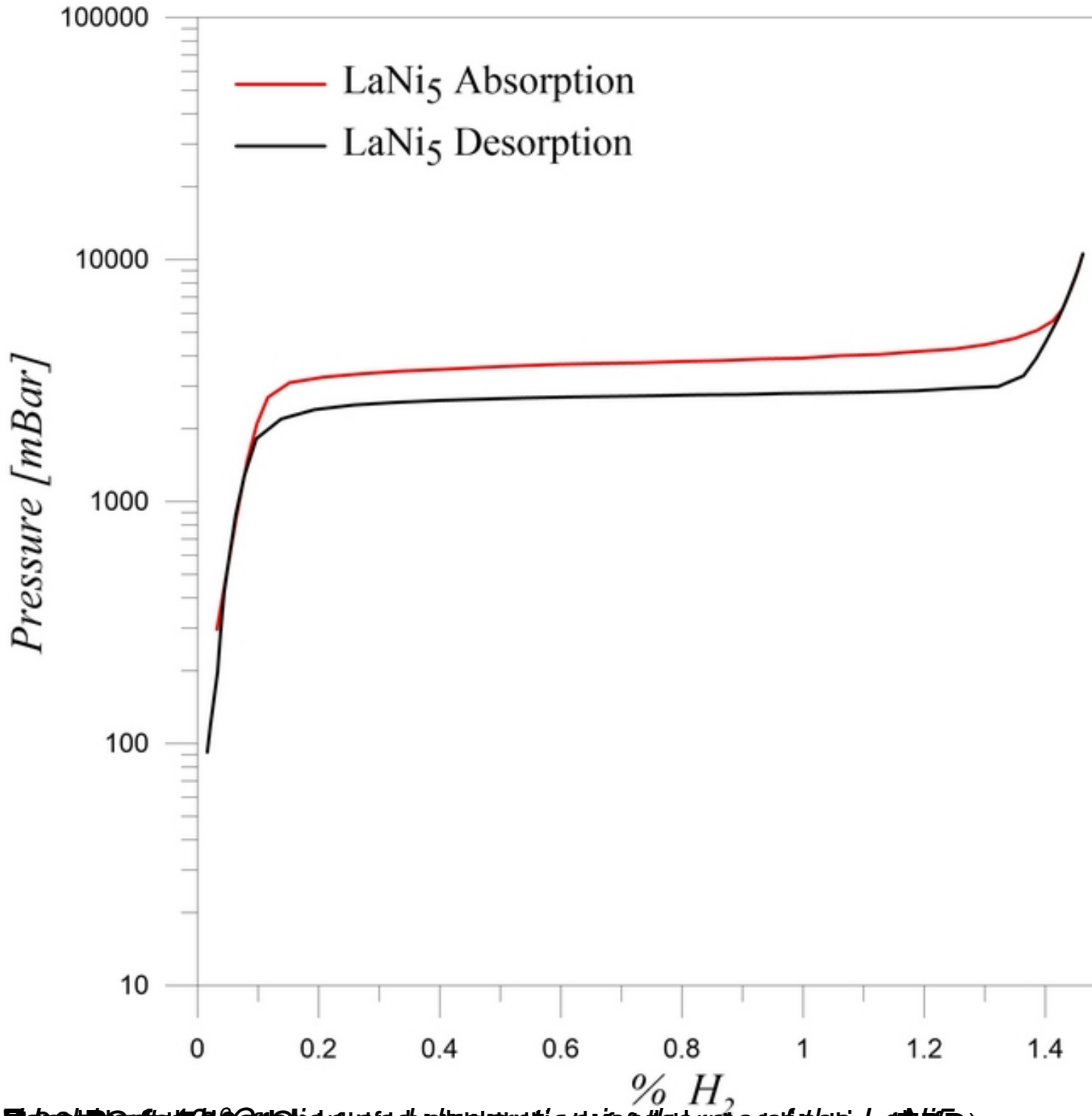
https://wwws.nist.gov/srmors/certificates/738.pdf). The measurements are performed in an air atmosphere.



Certificated references sample material "SRM 738 Stainless Steel"


Thermal expansion of the Ag3Mg
+1.150
+1.000
+0.500
-0.001
Expansion [%]
23
100
200
300
Temperature [°C]
L0 = 50.00 [mm]


hidenisochema.com



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PCA Zak

Laboratorium Badań Fizykochemicznych L-8 ul. Reymonta 25; 30-059 Kraków		
Przedmiot badań/wyrób	**Rodzaj działalności/ badane cechy/metoda**	**Dokum**
Materiały lite i spiekane: metale, stopy metali	Zmiany liniowe w funkcji temperatury Zakres: (20 – 507) °C Metoda dylatometryczna	P/19/IB-21 wyd. 2 zmod.
Materiały metaliczne i niemetaliczne, kompozyty *)	***Zawartość wodoru*** ***Zakres (0,01 – 11,00) %*** ***Metoda pomiaru: sorpcja wodoru w zakresie (temperatur od -190 °C do 500 °C i ciśnieniu od 0 do 200 bar)***	***P/19/IB-22*** ***wyd. 2 zmod.***

Laboratorium formułuje opinie i interpretacje w sprawozdaniach z badań podanych w powyższej tabeli.

*) Akredytacja zawieszona na wniosek podmiotu w części zakresu oznaczonego pogrubioną kursywą od 02.