

Tutorial COMAR



MINISTÉRIO DA
ECONOMIA



Entrar no site:

<https://www.comar.bam.de/home/login.php>

Welcome to the COMAR database. Please login (existing user) or sign up (new user) - free of charge.

User

Password

Clicar em “Sign Up**” para
inscrever-se.**

Inscrição para realizar pesquisas no site do COMAR:

Sign Up

User

Email

Select your preferred language. English ▼

Password

Retype password

Comment

OK

Cancel

Escolha um “**usuário**”

Escolha uma “**senha**” e
repita a “**senha**”.

Colocar o seu usuário (User) e senha (Password) e realizar o login:

Welcome to the COMAR database. Please login (existing user) or sign up (new user) - free of charge.

User

Password

Login

Edit Profile

Sign Up

Cancel

Escolher a forma desejada para realizar a pesquisa:

**CRM Name/
Description**

Search by CRM name, catalogue number or in the field description

Physical Property

Search by physical properties

**Conventional
Property**

Search by standardized properties

**Fields of
Application**

Search by fields of application

CRM Form

Search by form of material

Composition

Search by content of molecules and elements

Se a primeira forma de pesquisa for a escolhida: CRM Name/ Description:

**CRM Name/
Description**

Search by CRM name, catalogue number or in the field description

Tela encontrada:

Number of CRMs found: **10321**

CRM Name

A	N	O	Description	[+]
---	---	---	-------------	-----

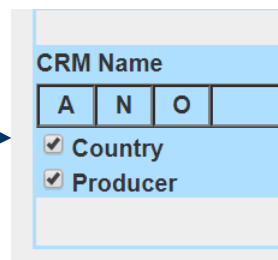
Country

Producer

Apply Filter Show Results Clear Search

Pode procurar o MRC por país.

**Marcar as caixas
“Country” e
“Producer”:**

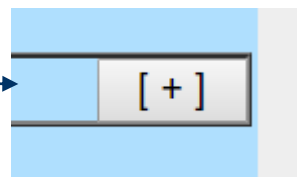


CRM Name

A	N	O	
---	---	---	--

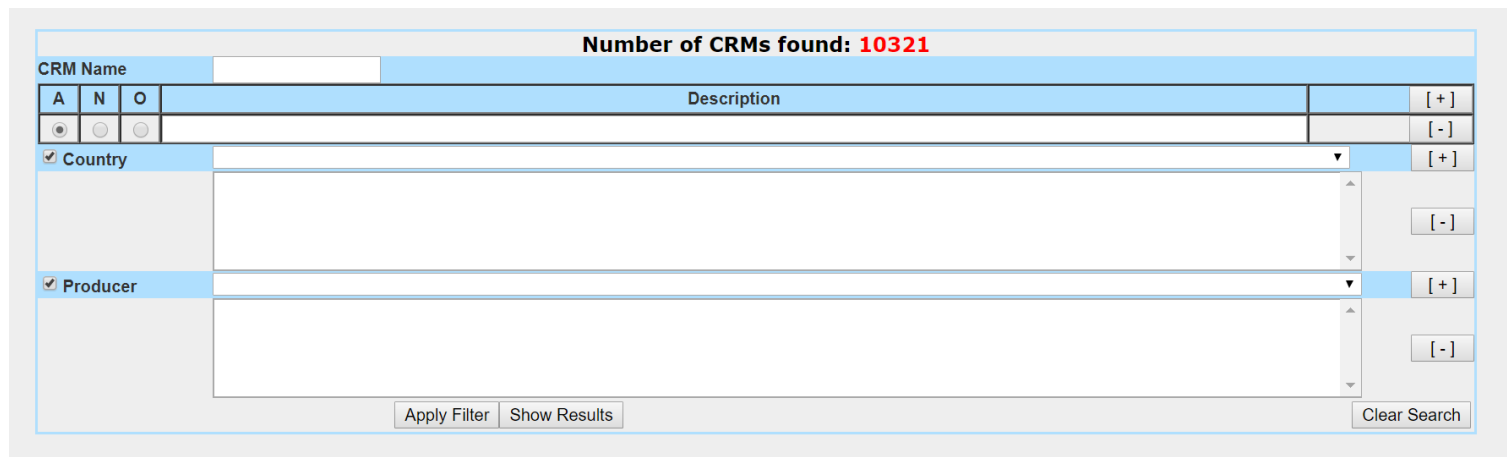
Country
 Producer

Clicar no [+]



[+]

Tela encontrada:



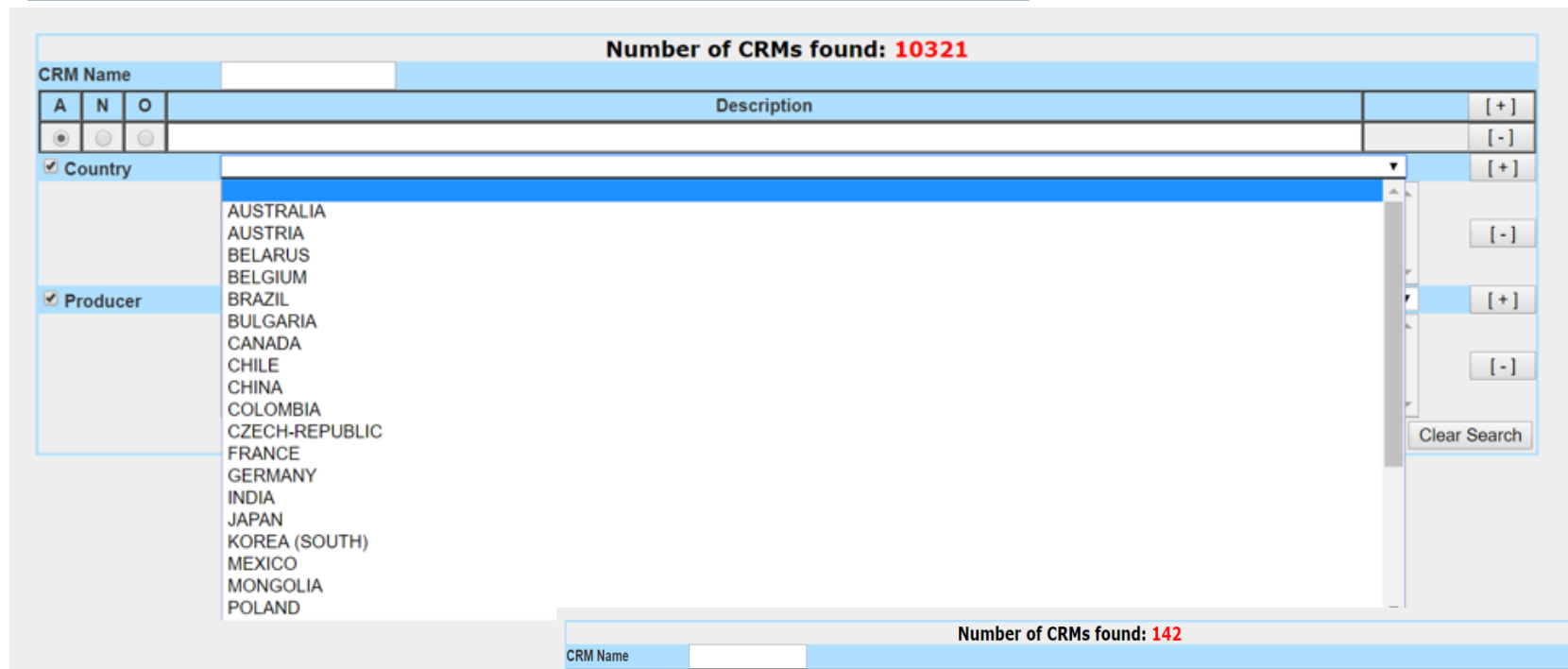
Number of CRMs found: **10321**

CRM Name

A	N	O	Description	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>		[+]
				[-]
<input checked="" type="checkbox"/> Country				[+]
<input type="text"/>				[-]
<input checked="" type="checkbox"/> Producer				[+]
<input type="text"/>				[-]

Apply Filter Show Results Clear Search

Escolher o país e clicar no [+]:



Number of CRMs found: **10321**

CRM Name:

A	N	O	Description	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>		[+]
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		[-]

Country

- AUSTRALIA
- AUSTRIA
- BELARUS
- BELGIUM
- BRAZIL
- BULGARIA
- CANADA
- CHILE
- CHINA
- COLOMBIA
- CZECH-REPUBLIC
- FRANCE
- GERMANY
- INDIA
- JAPAN
- KOREA (SOUTH)
- MEXICO
- MONGOLIA
- POLAND

Producer

[+]

[-]

[+]

[-]

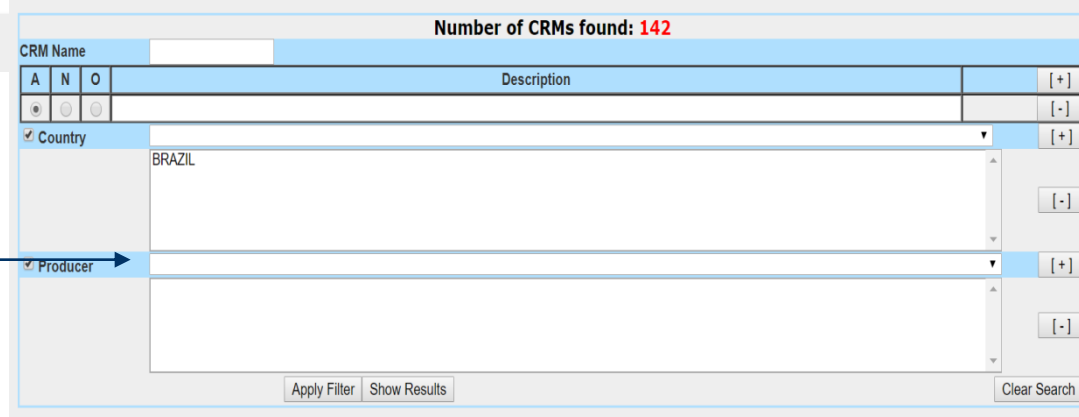
[-]

[+]

[-]

Clear Search

Tela encontrada:



Number of CRMs found: **142**

CRM Name:

A	N	O	Description	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>		[+]
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		[-]

Country

- BRAZIL

Producer

[+]

[-]

[+]

[-]

Apply Filter Show Results

Clear Search

Relatório gerado:

Number of results: 90

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1	CRM Name	Status	Year	Country	Validity
	BXBA-3	available	2014	BRAZIL	2034
Producer CENTRO DE TECNOLOGIA MINERAL - CETEM/					
A washed bauxite originating from Baixão de Ipiúna region, located in Bahia State, Brazil, Available alumina 54.0%; Reactive silica 1.08%; Total organic carbon 0.16% and Loss of mass 1000° C = 31.0%.					
This reference material is intended for use in calibration of a measurement a system, assessment of a measurement method, quality control and assigning values to materials with similar matrices.					
A unit of BXBA-3 consists of 110 g of powdered ore, packaged in a glass bottle. The material should be stored at ambient temperature in a dry place. Avoid prolonged exposure to air. Tightly recap the bottle after sampling.					
Fields of Application		Industries			
		-----Ores, Mineral Raw Materials			
2	CRM Name	Status	Year	Country	Validity
	BXBA-4	available	2014	BRAZIL	2034
Producer CENTRO DE TECNOLOGIA MINERAL - CETEM/					
A crude bauxite originating from Baixão de Ipiúna region, located in Bahia State, Brazil, Available alumina 43.7%; Reactive silica 4.5%; Total organic carbon 0.28% and Loss of mass 1000° C = 27.3%.					
This reference material is intended for use in calibration of a measurement system, assessment of a measurement method, quality control and assigning values to materials with similar matrices.					
A unit of BXBA-4 consists of 100 g of powdered ore, packaged in a glass bottle. The material should be stored at ambient temperature in a dry place. Avoid prolonged exposure to air. Tightly recap the bottle after sampling.					
Fields of Application		Industries			
		-----Ores, Mineral Raw Materials			
3	CRM Name	Status	Year	Country	Validity
	BXGO-1	available	2009	BRAZIL	2031
Producer CENTRO DE TECNOLOGIA MINERAL - CETEM/					
Bauxite originating from Barro Alto region, locate in Goiás State, Brazil; available alumina 59.3 %m/m ; reactive silica 0.52 % m/m and Loss of mass 1000 °C = 33.3 % m/m.					
BXGO-1 is intended for use in the development, validation and quality control of analytical methods and calibration of measurement equipment for the determination of major constituents in bauxite or other materials with a similar matrix.					
A unit of BXGO-1 consists of 120 g of powdered ore, packaged in a glass bottle. The material should be stored at ambient temperature in a dry place.					

**Caso queira pesquisar por produtor,
escolha o produtor e clicar no [+]:**

Number of CRMs found: **17**

CRM Name

A	N	O	Description	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		[+]
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>		[-]

Country [+]

Producer [+]

[-]

[-]

Apply Filter Show Results Clear Search

OBS: É possível acrescentar mais de um país e mais de um produtor. Clique no país ou produtor e clique no [+], quantas vezes for necessário.

Clicar em “Show Results”:

Number of CRMs found: 19

CRM Name

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Description

[+]

[-]

Country

BRAZIL

[+]

[-]

Producer

VISOMES COMERCIAL METROLOGICA LTDA/Produção de MRC

[+]

[-]

Apply Filter

Show Results

Clear Search

Relatório gerado:

1	CRM Name	Status	Year	Country	Validity
	<u>5mS/cm V-MRC-15</u>	available	2017	BRAZIL	31/12/2018
	Producer VISOMES COMERCIAL METROLÓGICA LTDA/Produção de MRC				
	5000 uS/cm electrolytic conductivity solution, calibration of eletrolytic conductivity meters, potassium chloride. The CRM V-MRC-15 consists of a solution gravimetrically prepared from Potassium chloride salt in purified water with electrolytic conductivity less than 2 uS/cm.				
	This CRM has its usage destined to the calibration or verification process of all types of eletrolytic conductivity meters.				
	This CRM was bottled in borosilicate glass flask containing a volume of approximately 250 mL of solution. This CRM must be stored protected from the light incidence and at a temperature of 25.0 ± 5.0 °C. It is recommended, after usage, to close the bottle and store it in the refrigerator, avoiding contact with possible contaminants.				
	Fields of Application	Inorganics -----other Inorganic RM Physical Properties -----RM for Physico-Chemical Properties Biological and Clinical -----Clinical Chemistry Industries -----other RM for Industry			
2	CRM Name	Status	Year	Country	Validity
	<u>5uS/cm V-MRC-10</u>	available	2017	BRAZIL	31/05/2018
	Producer VISOMES COMERCIAL METROLÓGICA LTDA/Produção de MRC				
	5 uS/cm electrolytic conductivity solution, calibration of eletrolytic conductivity meters, potassium chloride. The CRM V-MRC-10 consists of a solution gravimetrically prepared from Potassium chloride salt in a mixture of 1-propanol and purified water with electrolytic conductivity less than 1 uS/cm.				
	This CRM has its usage destined to the calibration or verification process of all types of eletrolytic conductivity meters.				
	This CRM was bottled in borosilicate glass flask containing a volume of approximately 250 mL of solution. This CRM must be stored protected from the light incidence and at a temperature of 25.0 ± 5.0 °C. It is recommended, after usage, to close the bottle and store it in the refrigerator, avoiding contact with possible contaminants.				
	Fields of Application	Inorganics -----other Inorganic RM Physical Properties -----RM for Physico-Chemical Properties Biological and Clinical -----Clinical Chemistry Industries -----other RM for Industry			

3	CRM Name	Status	Year	Country	Validity
	<u>V-MRC-1</u>	available	2017	BRAZIL	30/09/2018
	Producer VISOMES COMERCIAL METROLÓGICA LTDA/Produção de MRC				
	147 uS/cm electrolytic conductivity solution, calibration of electrolytic conductivity meters, potassium chloride. The CRM V-MRC-1 consists of a solution gravimetrically prepared from Potassium chloride salt in a mixture of 1-propanol and purified water with electrolytic conductivity less than 2 uS/cm.				
	This CRM has its usage destined to the calibration or verification process of all types of electrolytic conductivity meters.				
	This CRM was bottled in borosilicate glass flask containing a volume of approximately 250 mL of solution. This CRM must be stored protected from the light incidence and at a temperature of 25.0 ± 5.0 °C. It is recommended, after usage, to close the bottle and store it in the refrigerator, avoiding contact with possible contaminants.				
	Fields of Application	Inorganics -----other Inorganic RM Physical Properties -----RM for Physico-Chemical Properties Biological and Clinical -----Clinical Chemistry Industries -----other RM for Industry			
4	CRM Name	Status	Year	Country	Validity
	<u>V-MRC-11</u>	available	2017	BRAZIL	30/09/2018
	Producer VISOMES COMERCIAL METROLÓGICA LTDA/Produção de MRC				
	25 uS/cm electrolytic conductivity solution, calibration of electrolytic conductivity meters, potassium chloride. The CRM V-MRC-11 consists of a solution gravimetrically prepared from Potassium chloride salt in a mixture of 1-propanol and purified water with electrolytic conductivity less than 2 uS/cm.				
	This CRM has its usage destined to the calibration or verification process of all types of electrolytic conductivity meters.				
	This CRM was bottled in borosilicate glass flask containing a volume of approximately 250 mL of solution. This CRM must be stored protected from the light incidence and at a temperature of 25.0 ± 5.0 °C. It is recommended, after usage, to close the bottle and store it in the refrigerator, avoiding contact with possible contaminants.				
	Fields of Application	Inorganics -----other Inorganic RM Physical Properties -----RM for Physico-Chemical Properties Biological and Clinical -----Clinical Chemistry Industries -----other RM for Industry			

5	CRM Name	Status	Year	Country	Validity
	<u>V-MRC-12</u>	available	2016	BRAZIL	30/06/2018
	Producer VISOMES COMERCIAL METROLÓGICA LTDA/Produção de MRC				
	50 uS/cm electrolytic conductivity solution, calibration of eletrolytic conductivity meters, potassium chloride. The CRM V-MRC-12 consists of a solution gravimetrically prepared from Potassium chloride salt in a mixture of 1-propanol and purified water with electrolytic conductivity less than 2 uS/cm.				
	This CRM has its usage destined to the calibration or verification process of all types of eletrolytic conductivity meters.				
	This CRM was bottled in borosilicate glass flask containing a volume of approximately 250 mL of solution. This CRM must be stored protected from the light incidence and at a temperature of 25.0 ± 5.0 °C. It is recommended, after usage, to close the bottle and store it in the refrigerator, avoiding contact with possible contaminants.				
	Fields of Application	Inorganics ----other Inorganic RM Physical Properties ----RM for Physico-Chemical Properties Biological and Clinical ----Clinical Chemistry Industries ----other RM for Industry			
6	CRM Name	Status	Year	Country	Validity
	<u>V-MRC-13</u>	available	2017	BRAZIL	30/09/2018
	Producer VISOMES COMERCIAL METROLÓGICA LTDA/Produção de MRC				
	100 uS/cm electrolytic conductivity solution, calibration of eletrolytic conductivity meters, potassium chloride. The CRM V-MRC-13 consists of a solution gravimetrically prepared from Potassium chloride salt in a mixture of 1-propanol and purified water with electrolytic conductivity less than 2 uS/cm.				
	This CRM has its usage destined to the calibration or verification process of all types of eletrolytic conductivity meters.				
	This CRM was bottled in borosilicate glass flask containing a volume of approximately 250 mL of solution. This CRM must be stored protected from the light incidence and at a temperature of 25.0 ± 5.0 °C. It is recommended, after usage, to close the bottle and store it in the refrigerator, avoiding contact with possible contaminants.				
	Fields of Application	Inorganics ----other Inorganic RM Physical Properties ----RM for Physico-Chemical Properties Biological and Clinical ----Clinical Chemistry Industries ----other RM for Industry			

Pode também procurar pelo nome do MR/MRC

Number of CRMs found: **10324**

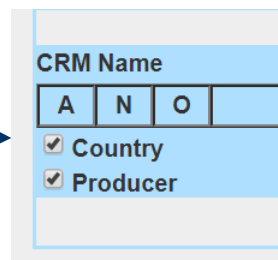
CRM Name

A	N	O	Description	[+]
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Country
 Producer

**No entanto deverá saber o nome exato do MR/MRC
e tem que estar em inglês.**

**Marcar as caixas
“Country” e
“Producer”:**

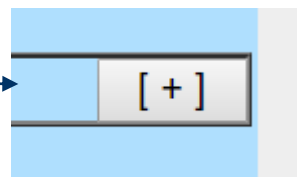


CRM Name

A	N	O	
---	---	---	--

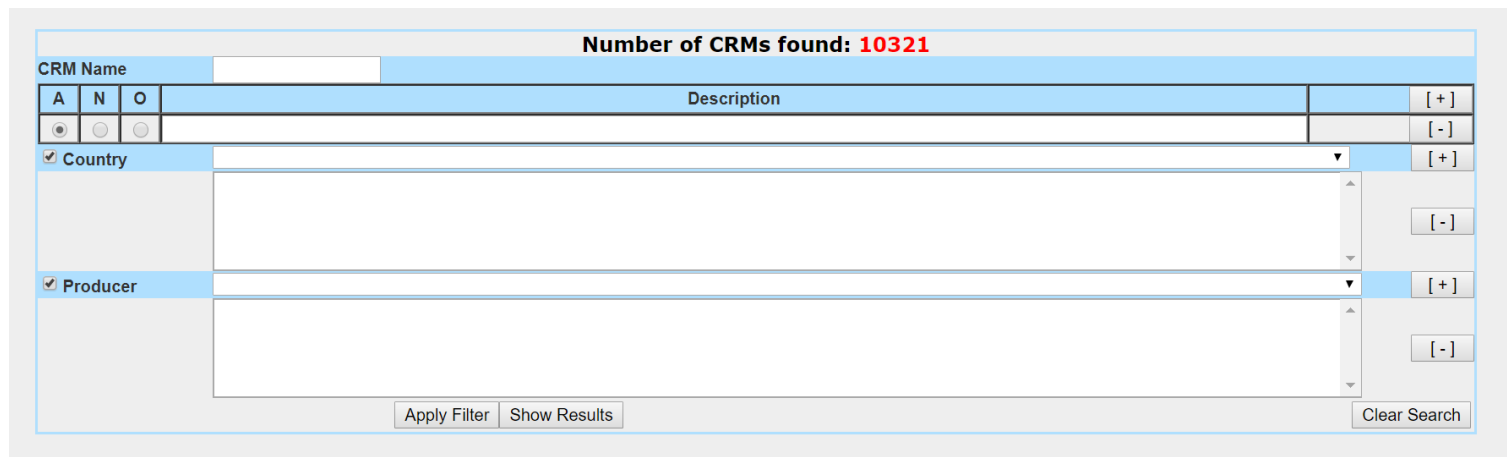
Country
 Producer

Clicar no [+]



[+]

Tela encontrada:



Number of CRMs found: **10321**

CRM Name

A	N	O	Description	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>		[+]
<input checked="" type="checkbox"/>			Country	[+]
<input checked="" type="checkbox"/>			Producer	[+]

Apply Filter Show Results Clear Search

Escolher o país e clicar no [+]:

Number of CRMs found: 6

CRM Name

A	N	O	Description	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>		[+]
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		[-]

Country
THE NETHERLANDS
UNITED-KINGDOM

Producer

Apply Filter Show Results Clear Search

Tela encontrada:

COMAR Startpage CRM Name/ Description Physical Property Conventional Property Fields of Application CRM Form Composition

Number of CRMs found: 6

CRM Name

A	N	O	Description	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>		[+]
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		[-]

Country
THE NETHERLANDS

Producer
VSL/Calibration & Reference materials

Apply Filter Show Results Clear Search

Number of CRMs found: 2

CRM Name			ethanol	
A	N	O	Description	
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>		[+] [-]
<input checked="" type="checkbox"/> Country			THE NETHERLANDS	[+] [-]
<input checked="" type="checkbox"/> Producer			VSL/Calibration & Reference materials	[+] [-]

Relatório gerado:

1	CRM Name	Status	Year	Country	Validity
	Ethanol in Air	available		THE NETHERLANDS	2 years after certification
Producer		VSL/Calibration & Reference materials			
Primary reference materials containing ethanol in synthetic air are available in a range of composition. Nominal fraction range: 75 ppm to 750 ppm (mol/mol). Within the listed range any composition can be supplied.					
Each mixture is prepared individually according to ISO standard 6142 (Gas analysis - Preparation of calibration gas mixtures - Gravimetric methods). After preparation the composition is verified against Dutch Primary Standard Gas Mixtures.					
Cylinder Pressure 11,5 MPa Cylinder Valve Outlet DIN 477 No 1 Approximate deliverable volume 0,6 m3					
Fields of Application		Quality of Life -----Legal Controls, Criminology Organics -----Common Organics:Solvents, Gases, Gas Mixtures			
2	CRM Name	Status	Year	Country	Validity
	Ethanol in N2	available		THE NETHERLANDS	2 years after certification
Producer		VSL/Calibration & Reference materials			
Primary reference materials containing ethanol in nitrogen are available in a range of composition. Nominal fraction range: 75 ppm to 750 ppm (mol/mol). Within the listed range any composition can be supplied.					
Each mixture is prepared individually according to ISO standard 6142 (Gas analysis - Preparation of calibration gas mixtures - Gravimetric methods). After preparation the composition is verified against Dutch Primary Standard Gas Mixtures.					
Cylinder Pressure 11,5 MPa Cylinder Valve Outlet DIN 477 No 1 Approximate deliverable volume 0,6 m3					
Fields of Application		Quality of Life -----Legal Controls, Criminology Organics -----Common Organics:Solvents, Gases, Gas Mixtures			

Number of results: 2

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Para realizar os outros tipos de pesquisa é o mesmo procedimento

**CRM Name/
Description**

Search by CRM name, catalogue number or in the field description

Physical Property

Search by physical properties

**Conventional
Property**

Search by standardized properties

**Fields of
Application**

Search by fields of application

CRM Form

Search by form of material

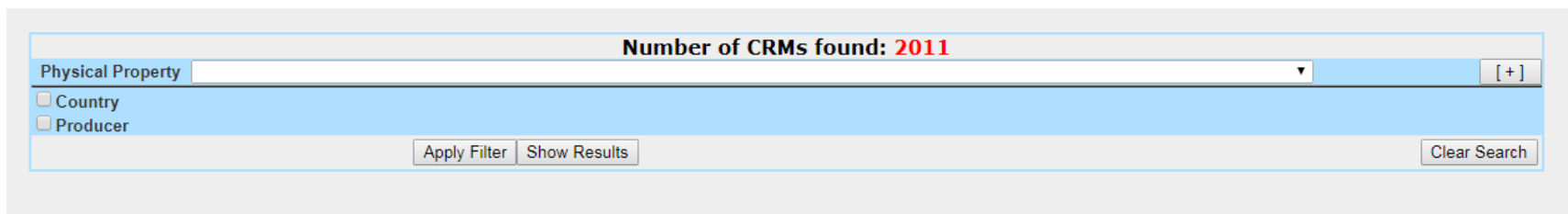
Composition

Search by content of molecules and elements

Se a segunda forma de pesquisa for a escolhida: Physical Property:

Physical Property Search by physical properties

Tela encontrada:



Number of CRMs found: **2011**

Physical Property [+]

Country

Producer

Apply Filter Show Results Clear Search

**Digita a propriedade física que deseja procurar e clica em [+].
Depois seleciona as caixas country e producer**

COMAR Startpage CRM Name/ Description Physical Property Conventional Property Fields of Application CRM Form Composition

Number of CRMs found: **1531**

Physical Property

[+]

Country

Producer

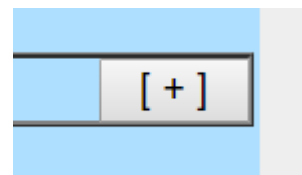
Absorbance (7-27.4)
Activity (9-33)
Amount concentration (8-13)
Amount of substance (8.3)
Angle (1-1)
Areal density (other)
Calorific value (other)
Cloud point (other)
Cold filter plugging point (other)
Colour temperature (other)
Conductivity (5-37)
Density (3-2)
Diameter (1-3.6)
Dynamic viscosity (3-23)
Electrolytic conductivity (8-48)
Enthalpy of fusion (4-20.3x)
Enthalpy of melting (other)
Enthalpy of phase transition (other)
Freezing point (other)

Clear Search

**Marcar as caixas
“Country” e
“Producer”:**



Clicar no [+]



Number of CRMs found: 9

Physical Property						[+]	
A	N	O	Physical Property	Unit	min	max	..
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Thermal conductivity (4-9)	W/(m.K)			[-]
<input checked="" type="checkbox"/> Country						[+]	
			BELGIUM UNITED-KINGDOM			[-]	
<input checked="" type="checkbox"/> Producer						[+]	
						[-]	

Apply Filter Show Results Clear Search

Selecionar o país e clicar em +; aparecerá lista com os produtores, selecionar o produtor que deseja pesquisar e clicar em +; depois clicar em show results.

1	CRM Name	Status	Year	Country	Validity
	<u>BCR-724</u>	available	2007	BELGIUM	
Producer	European Commission - Joint Research Centre/Dir F - Health, Consumers and Reference Materials - RM Unit				
Glass-Ceramic. The sample consists of a glass-ceramic cylinder. Different shapes are available. The reference material is intended for the quality control of equipment for absolute measurements (Guarded Hot Plate), or for the calibration of instruments based on relative measuring methods. BCR-724 samples can be stored in a normal laboratory environment. No special temperature or humidity conditions are required. For transportation it should be protected against cracking or chipping by packing between foam or polystyrene chips.					
Fields of Application	Physical Properties -----RM for Thermodynamics Industries -----Measurement and Test Techniques, Instrumentation				
2	CRM Name	Status	Year	Country	Validity
	<u>IRMM-440</u>	available	1981	BELGIUM	
Producer	European Commission - Joint Research Centre/Dir F - Health, Consumers and Reference Materials - RM Unit				
RESIN-BONDED GLASS FIBRE BOARD					
MATERIAL IN THE FORM OF SQUARE PANELS OF 35 mm THICKNESS AVAILABLE IN SIZES 0.30x0.30m , 0.50x0.50m , 0.60x0.60m AND 1.0x1.0m					
Fields of Application	Physical Properties -----RM for Thermodynamics				

Number of results: 2

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Considerações Finais

1 - O COMAR é um banco de dados internacional de Materiais de Referência gerenciado pelo instituto de metrologia da Alemanha (BAM), portanto lembre-se sempre de que suas buscas devem ser feitas em inglês;

2 – A interface do banco de dados do COMAR possui uma limitação de busca, na qual caso não se saiba o nome exato de cadastro do material terá maiores dificuldades para encontrá-lo. Veja o exemplo a seguir:

Number of CRMs found: 0

CRM Name: benzoic acid

A	N	O	Description	[+]
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>		[-]

Country

Producer

Clear Search

Foi pesquisado o Material de Ácido Benzoico de duas formas distintas, sem retorno de resultados

Number of CRMs found: 0

CRM Name: AcBenzo

A	N	O	Description	[+]
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>		[-]

Country

Producer

Apply Filter Show Results Clear Search

No entanto existe pelo ao menos um Material de Referencia de **Ácido Benzoico** cadastrado no COMAR:

15	CRM Name	Status	Year	Country	Validity
	<u>MRC8741AcBenzo</u>	available	2019	BRAZIL	29/01/2020
Producer	INMETRO - Instituto Nacional de Metrologia, Qualidade e Tecnologia /				
This CRM (Certified Reference Material) is composed of a solution of benzoic acid in orange juice, prepared by the gravimetric method and analyzed by flow injection analysis using mass spectrometer with isotope dilution and deuterated benzoic acid (D5) as an internal standard.					
This CRM has its use for tests to determine the mass fraction of benzoic acid in orange juice.					
This CRM was produced in batch of 5.9 mL of penicillin-borosilicate glass solutions containing 30 mL each. The CRM must be stored before and after use in a place protected from light and in the temperature range $(-20 \pm 5) ^\circ \text{C}$ so that it is frozen.					
Fields of Application	Biological and Clinical -----other Biological and Clinical RM Organics -----other Analytical Organic RM				