

PetDB Tutorial

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Petrological Database

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Table of Contents

Getting Started	2
Querying by:	
Location	3
Latitude/Longitude	3
Feature Name	4
Sample Type	5
Selecting Materials	5
Configuring Output	6
Chemistry/Chemical Range	8
Tectonic Setting	10
Age	10
Reference/Data Set	11
Cruise/Field Program	13
IGSN	14
Combining Search Criteria	15
Downloading Data	16
Selecting Individual vs Pre-Compiled Analyses	17
Feedback	19

Overview

PetDB (<http://www.earthchem.org/petdb>) is a global synthesis of chemical, isotopic, and mineralogical data for rocks, minerals, and melt inclusions. PetDB's current content focuses on data for

- igneous and metamorphic rocks from the ocean floor, specifically mid-ocean ridge basalts and abyssal peridotites, including those from ophiolites.
- xenolith samples from the Earth's mantle and lower crust.

Getting Started

Go to <http://www.earthchem.org/petdb>. To begin a query, click on the Search PetDB link on the PetDB homepage, or go to <http://www.earthchem.org/petdb/search>. You can create a query in PetDB by specifying one or more parameters. With each additional parameter, PetDB will retrieve the number of samples that possess the attributes chosen. Once you have selected a parameter and click 'Submit', you will return to the main search page, where selected criteria will be listed along with the number of samples that fit them.

You can then choose to:

- Download the Data
- View Samples on a Map
- View All Samples fitting your criteria
- View all References for these samples
- Access additional visualization tools ('Other Output Options').

Below is a description of each criterion you can define during sample selection and instructions on how to navigate the query interface. To learn how to download a dataset see the 'Selecting Chemical Data and Downloading Options' chapter of the tutorial.

Querying by Location



By Location

To query by location, you may define geospatial coordinates (latitude/longitude) in a number of ways.

Define a polygon on interactive map



1. Define a polygon on an interactive map.

Click the picture (southern polar map functions are identical) and the interactive map will appear. Click on the map to define a search polygon. Click on each vertex of the polygon, double-click on the last vertex to close the shape. You can zoom in/out using the +/- function. Use shift-click to create a smooth polygon with many vertices. Select 'Submit' and you will be returned to the search page with results listed in the right-hand box.

Define a bounding box

3. Define a bounding box with north, south, west, east

Latitude -90 to 90 (degrees)		Longitude -180 to 180 (degrees)	
Northern Bound	<input type="text"/>	Eastern Bound	<input type="text"/>
Southern Bound	<input type="text"/>	Western Bound	<input type="text"/>

Submit

Enter latitude and/or longitude of the geographical area you are interested in. Enter the Northern and Southern bounding latitudes (latitudes on the southern hemisphere need to be entered as negative values, e.g. $9.6^{\circ}\text{S} = -9.6$) and the Western and Eastern longitudes (Western longitudes need to be entered as negative values, e.g. $112^{\circ}\text{W} = -112$). Select 'Submit' and you will be returned to the search page with results listed in the right-hand box.

Define a polygon using lat/long pairs

4. Define a polygon with longitude/latitude pairs.

Enter a longitude/latitude pair for each vertex of an envelope or polygon. Separate the longitude/latitude pairs with semicolons. Enter the pairs in a sequence that traces the perimeter of a polygon. From 3 to 25 pairs are allowed. For example:

-109.6 41.2; -105.8 45.2; -101.6 41.1; -101.88 26.20; -109.9 36.3

Submit

If at any time you wish to return to the search page to start a different search simply click 'New Search' in the banner.

PetDB

EarthChem Home About PetDB Help **New Search**

Querying by Feature Name



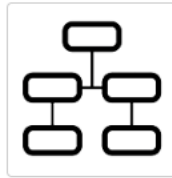
By Feature

To query samples by the name of an area or by type of geographic feature, search by feature name, and select the desired names. Note that it is possible to select from more than one Feature Name grouping. Geographical names are used on various regional scales ranging from names of oceans to the names of seamounts, platforms, fracture zones, and volcanoes. Click on 'Add' or 'Add All' to make your selection, then click 'Submit' to set the query parameter.

Set Feature Name

Area on Ridge		<div>Add All >> Add >> << Remove << Remove All Submit</div>	
Back-Arc Basin			
Cinder Cone			
Country			
Craton			
Diatreme			
Focus Site			
Fossil Ridge			
Fracture Zone			
Island Group			
Large Igneous Province			
Maar			
Mobile Belt			
Ocean			
Ocean Basin			
Oceanic Plateau			
Oceanic Ridge			
Ocean Island			
Ophiolite			
Orogenic Belt			
Plateau			
Ridge Section			
Rift			
Sea			

Querying by Sample Type



By Sample Type

Clicking on a rock type will display a list of rock classes in the selection box. Please note that 'rock class' is based primarily on classification information provided in the source publications and is NOT an interpretation of data by PetDB.

Set Sample Type

1	altered material	<div>Add All >></div> <div>Add >></div> <div><< Remove</div> <div><< Remove All</div> <div>Submit</div>	
2	exotic		
3	igneous:plutonic:felsic		
4	igneous:plutonic:intermediate		
5	igneous:plutonic:mafic		
6	igneous:plutonic:ultramafic		
7	igneous:volcanic:clastic		
8	igneous:volcanic:felsic		
9	igneous:volcanic:intermediate		
10	igneous:volcanic:mafic		
11	igneous:volcanic:ultramafic		
12	metamorphic		
13	ore		
14	sedimentary		
15	sedimentary:conglomerate&breccia		
16	sedimentary:siliceous		
17	sedimentary:siliciclastic		
18	vein		
19	xenolith		

Selecting Materials

After selecting samples, click 'Download Data', then delimit the material of interest (Rock, Mineral, or Inclusion).

Choose Material:

<input type="radio"/>	Rock Samples [Total:174 (16 glass, 158 whole rock)]
<input type="radio"/>	Mineral Samples [Total:95]
<input type="radio"/>	Inclusion Samples [Total:7]

Continue to Analyte Selection

Clicking 'Continue to Analyte Selection' will bring you to a page to select chemical elements of interest and output configuration. Bold text indicates the analytes for which there is data for any of the samples. You can refine/update your selection by deselecting items. If you select 'Mineral Samples' a drop down menu of mineral species will appear.

Clear All Items

Output Options

PetDB gives you the option to choose desired type of file: HTML Table, Text File, or XLSX Spreadsheet:

File Type to Display: ☒ HTML Table ☐ Text File ☐ XLSX Spreadsheet

Output formats offered are 'One Row Per Method', where a sample analyzed by multiple methods will show each line of data on a separate row.

Output Format: ☒ One Row Per Method ☐ One Row Per Sample ☐ Show Methods ☐ Show Units ☐

Or output as 'One Row Per Sample', where data for the same sample but from various methods will be concatenated into one row. Check boxes provide the option to display methods and units.

Output Format: ☐ One Row Per Method ☒ One Row Per Sample ☐ Show Methods ☒ Show Units ☒

For more details see the 'Selecting Individual vs Pre-Compiled Analyses' section further below.

Once all selections are made click 'View and Download Results'

View and Download Results

In addition to the data, the HTML output table contains links to metadata such as the Sample ID page, find similar samples in LEPR, a map display, find similar samples in PetDB, Expedition ID page, and references from which the data came. All of these selections either open a new tab, or display on top of the selection, so your underlying search is not lost.

Sample Data Output: 411 results found

New Search Download XLSX Download Text File
1 2 3 4 5 6 7 8 9 of 9

SAMPLE ID	LEPR	MAP	SIMILAR	EXPEDITION ID	REFERENCES	LATITUDE	LONGITUDE	MIN AGE	AGE	MAX AGE	METHODS	ANALYZED MATERIAL	ROCK TYPE	ROCK NAME	SiO ₂	SiO ₂ UNIT	SiO ₂ METHOD	TI
ENV0085-002-001	LEPR	MAP	SIMILAR	ENV0085	MICHAEL, 1989	49.76	-130.266				EMP	GLASS	IGNEOUS-VOLCANIC MAFIC	BASALT	51.5	wt %	EMP	1.5
ENV0085-002-001	LEPR	MAP	SIMILAR	ENV0085	MICHAEL, 1989	49.76	-130.266				XRF	WHOLE ROCK	IGNEOUS-VOLCANIC MAFIC	BASALT	50.02	wt %	XRF	1.5
ENV0085-002-001	LEPR	MAP	SIMILAR	ENV0085	MICHAEL, 1989; MICHAEL, 1998	49.76	-130.266				EMP	GLASS	IGNEOUS-VOLCANIC MAFIC	BASALT	51.07	wt %	EMP	1.5

Querying by Chemistry



By Chemistry

Use this filter to select samples by setting a min/max range of chemical values.

Set Chemistry / CIPW Norms

Query Operator:

- ☒ AND i.e. $0 < \text{SiO}_2 < 5$ AND $0 < \text{TiO}_2 < 5$
☐ OR i.e. $0 < \text{SiO}_2 < 5$ OR $0 < \text{TiO}_2 < 5$

MAJOR ELEMENTS

Submit

EXISTS				UNITS
<input checked="" type="checkbox"/>	0	<	SiO ₂	< 100 WT%
<input type="checkbox"/>		<	TiO ₂	< WT%
<input type="checkbox"/>		<	Al ₂ O ₃	< WT%
<input type="checkbox"/>		<	Fe ₂ O ₃	< WT%
<input type="checkbox"/>		<	Fe ₂ O ₃ Total	< WT%
<input type="checkbox"/>		<	FeO	< WT%

Check the box to the left of an analyte, define the desired range and click 'Submit'. This queries **all** samples with values of an analyte, regardless of rock type or location. For example, selecting SiO₂ across the full range of values yields samples from 8 different classifications.

Results:

	Classification	Count
<input checked="" type="checkbox"/>	Igneous	71076
<input checked="" type="checkbox"/>	Ore	585
<input checked="" type="checkbox"/>	Metamorphic	1262
<input checked="" type="checkbox"/>	Unknown	684
<input checked="" type="checkbox"/>	Xenolith	2826
<input checked="" type="checkbox"/>	Vein	24
<input checked="" type="checkbox"/>	Exotic	1535
<input checked="" type="checkbox"/>	Sedimentary	355

Download Data

View Sample Map

View all Samples

View all References

Other Output Options

Criteria Set:
1. ☒ $0 < \text{SiO}_2 < 100$

Clicking 'download data' will provide a view to select desired material.

Choose Material:

☐ Rock Samples [Total:61347 (27199 glass, 34148 whole rock)]

☐ Mineral Samples [Total:23009]

☒ Inclusion Samples [Total:2517]

Continue to Analyte Selection

On the next page **all** chemical analytes, in addition to the chosen SiO₂, for the samples will be displayed. This gives users a broader view of available data. Users can select and deselect analytes of interest.

Clicking 'Mark All' or 'Clear All' provides a quick way to make further selections. Items can also be selected/deselected one-by-one using the check boxes.

Once the selection process is complete click 'View and Download Results'

CONFIGURE OUTPUT

Samples to Display: ☒ Show samples with any of the checked values defined.
☐ Show samples with all of the below values defined.

File Type to Display: ☒ HTML Table ☐ Text File ☐ XLSX Spreadsheet

Output Format: ☒ One Row Per Method
☐ One Row Per Sample Show Methods ☐ Show Units ☐

Choose Chemical Data to Display:

Note: The items shown in bold below actually have values that lie within your search criteria. Those which are not bold do not have any values within your search. You can use the buttons below to choose a set of standard output items to use with multiple downloads.

Include Standard Output Items Include Items that Exist in Current Query Clear All Items

MAJOR OXIDE:	RATIO:	NOBLE GAS:	RARE EARTH ELEMENT:	URANIUM SERIES:	VOLATILE:	TRACE ELEMENT:	STABLE ISOTOPES:	RADIOGENIC ISOTOPES:
<input type="checkbox"/> Mark All <input type="checkbox"/> Clear All <input checked="" type="checkbox"/> SiO ₂ <input type="checkbox"/> TiO ₂ <input type="checkbox"/> Al ₂ O ₃ <input type="checkbox"/> Cr ₂ O ₃ <input type="checkbox"/> Fe ₂ O ₃ <input type="checkbox"/> Fe ₂ O ₃ Total	<input type="checkbox"/> Mark All <input type="checkbox"/> Clear All <input type="checkbox"/> Fe ₃ P FET <input type="checkbox"/> N(B) <input type="checkbox"/> N(A)	<input type="checkbox"/> Mark All <input type="checkbox"/> Clear All <input type="checkbox"/> He <input type="checkbox"/> He ₃ <input type="checkbox"/> He ₄ Ncc <input type="checkbox"/> He ₄ <input type="checkbox"/> ³ He / ⁴ He <input type="checkbox"/> ⁴ He / ³ He	<input type="checkbox"/> Mark All <input type="checkbox"/> Clear All <input type="checkbox"/> La <input type="checkbox"/> Ce <input type="checkbox"/> Pr <input type="checkbox"/> Nd <input type="checkbox"/> Sm <input type="checkbox"/> Eu	<input type="checkbox"/> Mark All <input type="checkbox"/> Clear All <input type="checkbox"/> ²³¹ Pa <input type="checkbox"/> ²³⁴ U <input type="checkbox"/> ²³⁸ U <input type="checkbox"/> ²³⁴ U / ²³⁸ U <input type="checkbox"/> ²³⁴ U / ²³⁸ U	<input type="checkbox"/> Mark All <input type="checkbox"/> Clear All <input type="checkbox"/> CO ₂ <input type="checkbox"/> CO ₂ U Mol <input type="checkbox"/> F <input type="checkbox"/> Cl <input type="checkbox"/> CO ₁ <input type="checkbox"/> CH ₄	<input type="checkbox"/> Mark All <input type="checkbox"/> Clear All <input type="checkbox"/> Ag <input type="checkbox"/> Al <input type="checkbox"/> As <input type="checkbox"/> Au <input type="checkbox"/> B <input type="checkbox"/> Ba	<input type="checkbox"/> Mark All <input type="checkbox"/> Clear All <input type="checkbox"/> Delta ⁵⁷ Fe <input type="checkbox"/> Delta ¹⁸ O <input type="checkbox"/> Delta ¹⁹ O <input type="checkbox"/> Delta ¹³ C <input type="checkbox"/> Delta ³⁷ Cl	<input type="checkbox"/> Mark All <input type="checkbox"/> Clear All <input type="checkbox"/> ⁸⁷ Sr / ⁸⁶ Sr <input type="checkbox"/> ⁸⁷ Sr / ⁸⁶ Sr (I) <input type="checkbox"/> ⁸⁷ Rb / ⁸⁶ Sr <input type="checkbox"/> ⁸⁶ Sr / ⁸⁶ Sr <input type="checkbox"/> E Sr

The resulting HTML file summarizes the results and the data can now be downloaded in the user's preferred format.

Sample Data Output: 2905 results found

New Search Download XLSX Download Text File

1 2 3 4 ... 56 57 58 59 of 59 NEXT>>

SAMPLE ID	IGSN	LEPR	MELTS	MAP	SIMILAR	REFERENCE	EXPEDITION ID	LATITUDE	LONGITUDE	MIN AGE	AGE	MAX AGE	METHOD	ANALYZED MATERIAL	ROCK TYPE
09N039W-UDM-HOST				MAP		SOBOLEV_1993	nr	9	-39.5				EMP	INCLUSION	IGNEOUS-VOLCANIC-MAFIC
09N039W-UDM-HOST				MAP		SOBOLEV_1993	nr	9	-39.5				EMP	INCLUSION	IGNEOUS-VOLCANIC-MAFIC
09N039W-UDM-HOST				MAP		SOBOLEV_1993	nr	9	-39.5				EMP	INCLUSION	IGNEOUS-VOLCANIC-MAFIC
09N039W-UDM-HOST				MAP		SOBOLEV_1993	nr	9	-39.5				EMP	INCLUSION	IGNEOUS-VOLCANIC-MAFIC
ABP0012-002-008A		LEPR	MELTS	MAP	SIMILAR	DMITRIEV_1991	ABP0012	33.72	-38.56				EMP	INCLUSION	IGNEOUS-VOLCANIC-MAFIC
ABP0012-019-001		LEPR	MELTS	MAP	SIMILAR	DMITRIEV_1991	ABP0012	14.47	-45.13				EMP	INCLUSION	IGNEOUS-VOLCANIC-MAFIC
ABP0012-032-004		LEPR	MELTS	MAP	SIMILAR	DMITRIEV_1991	ABP0012	14.563	-44.975				EMP	INCLUSION	IGNEOUS-VOLCANIC-MAFIC
AGAVE-001-012-001		LEPR	MELTS	MAP	SIMILAR	SHAW_2010	AGAVE	85.6263	85.2398				EMP	INCLUSION	IGNEOUS-VOLCANIC-MAFIC
AGAVE-001-013-001		LEPR	MELTS	MAP	SIMILAR	SHAW_2010	AGAVE	85.6138	85.3547				EMP	INCLUSION	IGNEOUS-VOLCANIC-MAFIC
AI0032-3-011-177				MAP		KAMENETSKY_1998	AI0032-3	42.955	-29.258				EMP	INCLUSION	IGNEOUS-VOLCANIC-MAFIC
AI0032-3-011-177		LEPR	MELTS	MAP	SIMILAR	KAMENETSKY_1998	AI0032-3	42.955	-29.258				EMP	INCLUSION	IGNEOUS-VOLCANIC-MAFIC
AI0093-6-011-006		LEPR	MELTS	MAP	SIMILAR	PRICE_1986	AI0093-6	-24.675	70.045				EMP	INCLUSION	IGNEOUS-VOLCANIC-MAFIC
AI0093-6-011-007		LEPR	MELTS	MAP	SIMILAR	PRICE_1986	AI0093-6	-24.675	70.045				EMP	INCLUSION	IGNEOUS-VOLCANIC-MAFIC
AI0093-6-011-016		LEPR	MELTS	MAP	SIMILAR	PRICE_1986	AI0093-6	-24.675	70.045				EMP	INCLUSION	IGNEOUS-VOLCANIC-MAFIC
AI0093-6-013-001		LEPR	MELTS	MAP	SIMILAR	PRICE_1986	AI0093-6	-25.78	70.183				EMP	INCLUSION	IGNEOUS-VOLCANIC-MAFIC
AI0093-6-013-003		LEPR	MELTS	MAP	SIMILAR	PRICE_1986	AI0093-6	-25.78	70.183				EMP	INCLUSION	IGNEOUS-VOLCANIC-MAFIC
AI0112-24-004-001		LEPR	MELTS	MAP	SIMILAR	YONOVER_1989	AI0112-24	2.35	-95.49				EMP	INCLUSION	IGNEOUS-VOLCANIC-MAFIC
AI0112-24-005-001		LEPR	MELTS	MAP	SIMILAR	YONOVER_1989	AI0112-24	2.4	-95.53				EMP	INCLUSION	IGNEOUS-VOLCANIC-MAFIC

Querying by Tectonic Setting



By Tectonic
Setting

Use this criterion to query samples from tectonic features such as 'Fracture Zones', 'Back-Arc Basins', or 'Seamounts'.

Set Tectonic Setting

ABYSSAL_HILL ASEISMIC_RIDGE BACK-ARC_BASIN CONTINENTAL_RIFT CONVERGENT_MARGIN FAILED_RIFT FOREARC FOSSIL_RIDGE FRACTURE_ZONE INCIPIENT_RIFT INTRAPLATE_CRATON INTRAPLATE_OFF-CRATON ISLAND_ARC_ACCRETED OCEAN_BASIN OCEANIC_PLATEAU	<div>Add >></div> <div><< Remove</div> <div>CLEAR</div>	
---	---	--

Submit

To add multiple tectonic settings click the selection, then use Add>> to move selection to the box on the right and click 'Submit'.

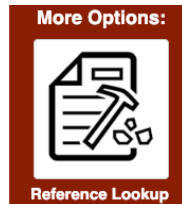
Querying by Age



By Age

This query supports sample searches by: Age Span; Exact Age (in millions of years); Geological Age; or all samples for which an age determination exists.

Querying by Reference/Dataset Lookup



Under More Options 'Reference Lookup' can be done by Author, Publication Year, Title, or Journal. Click the top of any column to sort. Use the magnifiers to search for a specific item.

Total Count: 2674

Authors	Year	Title	Journal
Q	Q	Q	Q
CHRISTIE, D M; SINTON, J M	1981	EVOLUTION OF ABYSSAL LAVAS ALONG PROPAGATING SEGMENTS OF THE GALAPAGOS SPREADING CENTER	EARTH PLANET SCI LETT
VERMA, S P; SCHILLING, J-G	1982	GALAPAGOS HOT SPOT SPREADING CENTER SYSTEM 2. 87SR/86SR AND LARGE I...	J GEOPHYS RES
FISK, M R; BENICE, A E; SCHILLING, J-G	1982	MAJOR ELEMENT CHEMISTRY OF GALAPAGOS RIFT ZONE MAGMAS AND THEIR P...	EARTH PLANET SCI LETT
BYERS, C D; CHRISTIE, D M; MUENOW, D W; SINTON, J M	1984	VOLATILE CONTENTS AND FERRIC-FERROUS RATIOS OF BASALT, FERROBASALT, A...	GEOCHIM COSMOCHIM A...

Click on any title to access the Citation Information page for that reference.

PetDB

Citation Information

General Information

Citation Title:	EVOLUTION OF ABYSSAL LAVAS ALONG PROPAGATING SEGMENTS OF THE GALAPAGOS SPREADING CENTER
Authors:	CHRISTIE, D M; SINTON, J M
Publication Year:	1981
Journal:	EARTH PLANET SCI LETT
Publisher:	N/A
Issue:	N/A
Volume:	56
Pages:	321-335
DOI:	10.1016/0012-821X(81)90137-0
Status:	COMPLETED 2003-11-25
Comment:	N/A

+ Datasets (1)

+ Methods (1)

+ Expeditions (1)

+ Stations (17)

Clicking the doi link will take you to the publisher's page.

As you scroll down, metadata will be visible for datasets, methods, expeditions, stations, specimens, and items measured related to this publication. Click on any one of these to see more information.

Clicking on 'Data Sets' will display the table(s) from this publication.

General Information

Citation Title:

EVOLUTION OF ABYSSAL LAVAS ALONG PROPAGATING SEGMENTS OF THE GALAPAGOS SPREADING CENTER

Authors:

CHRISTIE, D M; SINTON, J M

Publication Year:

1981

Journal:

EARTH PLANET SCI LETT

Publisher:

N/A

Issue:

N/A

Volume:

56

Pages:

321-335

DOI:

10.1016/0012-821X(81)90137-0

Status:

COMPLETED | 2003-11-25

Comment:

N/A

Datasets (1)

Table Num

Table Title

Data Available

Items measured

2

ELECTRON MICROPROBE ANALYSES OF REPRESENTATIVE GLASSES FROM ALL KANA KEOKI 1979 CHEMICAL GROUPS EXCEPT K32 (COCOS RIDGE)

Unspecified rock material, whole rock or glass

9

Clicking the highlighted number to the left of the table title will display the full data set.

Dataset Information

1-2:ELECTRON MICROPROBE ANALYSES OF REPRESENTATIVE GLASSES FROM ALL KANA KEOKI 1979 CHEMICAL GROUPS EXCEPT K32 (COCOS RIDGE) ([CHRISTIE,1981](#))

Rock Data (35 Rows)

Drag a column header here to group by that column

<input type="checkbox"/>	Specimen Code	Specimen Name	IGSN	Material	SiO2	TiO2	Al2O3	FeOT	MgO	CaO	Na2O	K2O	P2O5	Meth
<input type="checkbox"/>	KAK1979-010-030	10-30	N/A	Unspecified rock material, whole rock or glass	48.23	0.83	17.48	8.95	9.24	12.34	2.08	0.04	0.07	EMP
<input type="checkbox"/>	KAK1979-010-034	10-34	N/A	Unspecified rock material, whole rock or glass	48.06	0.99	17.33	9.49	8.99	12.02	2.35	0.05	0.07	EMP
<input type="checkbox"/>	KAK1979-011-001	11-1	N/A	Unspecified rock material, whole rock or glass	49.96	0.95	15.92	8.86	8.82	12.78	1.92	0.06	0.09	EMP
<input type="checkbox"/>	KAK1979-011-013	11-13	N/A	Unspecified rock material, whole rock or glass	50.23	1.05	15.46	9.36	9.24	12.19	1.97	0.07	0.09	EMP
<input type="checkbox"/>	KAK1979-011-049	11-49	N/A	Unspecified rock material, whole rock or glass	50.03	0.91	15.7	8.8	9.37	12.83	1.83	0.08	0.09	EMP
<input type="checkbox"/>	KAK1979-012-118	12-118	N/A	Unspecified rock material, whole rock or glass	50.84	1.15	15.39	9.54	7.97	12.56	2.11	0.09	0.12	EMP
<input type="checkbox"/>	KAK1979-012-153	12-153	N/A	Unspecified rock material, whole rock or glass	50.57	1.02	15.43	9.33	8.4	12.79	1.96	0.07	0.09	EMP
<input type="checkbox"/>	KAK1979-012-032	12-32	N/A	Unspecified rock material, whole rock or glass	49.56	1.02	15.59	10.04	8.79	12.05	2.2	0.06	0.09	EMP
<input type="checkbox"/>	KAK1979-012-033	12-33	N/A	Unspecified rock material, whole rock or glass	49.88	1.02	15.41	9.23	8.62	12.06	2.2	0.07	0.12	EMP
<input type="checkbox"/>	KAK1979-012-008	12-8	N/A	Unspecified rock material, whole rock or glass	50.76	1.84	13.7	12.96	6.12	10.64	2.42	0.16	0.18	EMP
<input type="checkbox"/>	KAK1979-014-003	14-3	N/A	Unspecified rock material, whole rock or glass	51.21	1.76	13.48	12.88	6.19	10.86	2.5	0.17	0.17	EMP
<input type="checkbox"/>	KAK1979-015-002	15-2	N/A	Unspecified rock material, whole rock or glass	50.8	1.86	13.86	12.01	6.61	11.3	2.33	0.15	0.2	EMP
<input type="checkbox"/>	KAK1979-015-003	15-3	N/A	Unspecified rock material, whole rock or glass	50.61	1.75	14.34	11.76	6.85	11.42	2.29	0.14	0.16	EMP
<input type="checkbox"/>	KAK1979-016-038	16-38	N/A	Unspecified rock material, whole rock or glass	49.99	1.16	15.83	9.56	8.2	12.79	2.46	0.1	0.09	EMP
<input type="checkbox"/>	KAK1979-017-001	17-1	N/A	Unspecified rock material, whole rock or glass	49.68	0.86	16.38	9.34	9.34	12.15	2.2	0.04	0.08	EMP

*Note: The data tables contain only values that are original to the reference publication and which have not been reported in other publications. Referenced values can be found in the original publications in which the data appeared.

Data from a table can be directly downloaded by selecting the Export Icon on the right

PetDB

Dataset Information

1-2:ELECTRON MICROPROBE ANALYSES OF REPRESENTATIVE GLASSES FROM ALL KANA KEOKI 1979 CHEMICAL GROUPS EXCEPT K32 (COCOS RIDGE) (CHRISTIE,1981)

Rock Data (35 Rows)

Drag a column header here to group by that column

Specimen Code	Specimen Name	IGSN	Material	SiO2	TiO2	Al2O3	FeOT	MgO	CaO	Na2O	K2O	P2O5	Method
KAK1979-010-030	10-30	N/A	Unspecified rock material, whole rock or glass	48.23	0.83	17.48	8.95	9.24	12.34	2.08	0.04	0.07	EMP






From here you can export all data or select rows by checking the box(es) to the left of the Specimen Code.

If you wish to limit the columns in the data set table click the 'Column Chooser' icon. Drag columns you wish to hide into the pop-up box. To undo, simply drag the column heading back onto the data table. Columns in the box will not be included in the download.


Dataset Information



1-2:ELECTRON MICROPROBE ANALYSES OF REPRESENTATIVE GLASSES FROM ALL KANA KEOKI 1979 CHEMICAL GROUPS EXCEPT K32 (COCOS RIDGE) (CHRISTIE,1981)

Rock Data (35 Rows)

Drag a column header here to group by that column

Specimen Code	Specimen Name	IGSN	Material	SiO2	TiO2	Al2O3	FeOT	MgO	CaO	Na2O	Method Code	K2O
KAK1979-010-030	10-30	N/A	Unspecified rock material, whole rock or glass	48.23	0.83	17.48	8.95	9.24	12.34	2.08	EMP	0.04
KAK1979-010-034	10-34	N/A	Unspecified rock material, whole rock or glass	48.06	0.99	17.33	9.49	8.99	12.02	2.35	EMP	0.05
KAK1979-011-001	11-1	N/A	Unspecified rock material, whole rock or glass	49.96	0.95	15.92	8.86	8.82	12.78	1.92	EMP	0.06
KAK1979-011-013	11-13	N/A	Unspecified rock material, whole rock or glass	50.23	1.05	15.46	9.36	9.24	12.19	1.97	EMP	0.07
KAK1979-011-049	11-49	N/A	Unspecified rock material, whole rock or glass	50.03	0.91	15.7	8.8	9.37	12.83	1.83	EMP	0.08
KAK1979-012-118	12-118	N/A	Unspecified rock material, whole rock or glass	50.84	1.15	15.39	9.54	7.97	12.56	2.11	EMP	0.09
KAK1979-012-153	12-153	N/A	Unspecified rock material, whole rock or glass	50.57	1.02	15.43	9.33	8.4	12.79	1.96	EMP	0.07
KAK1979-012-032	12-32	N/A	Unspecified rock material, whole rock or glass	49.56	1.02	15.59	10.04	8.79	12.05	2.2	EMP	0.06
KAK1979-012-033	12-33	N/A	Unspecified rock material, whole rock or glass	49.88	1.02	15.41	9.23	8.62	12.06			
KAK1979-012-008	12-8	N/A	Unspecified rock material, whole rock or glass	50.76	1.84	13.7	12.96	6.12	10.64			
KAK1979-014-003	14-3	N/A	Unspecified rock material, whole rock or glass	51.21	1.76	13.48	12.88	6.19	10.86			
KAK1979-015-002	15-2	N/A	Unspecified rock material, whole rock or glass	50.8	1.86	13.86	12.01	6.61	11.3			
KAK1979-015-003	15-3	N/A	Unspecified rock material, whole rock or glass	50.61	1.75	14.34	11.76	6.85	11.42			
KAK1979-016-038	16-38	N/A	Unspecified rock material, whole rock or glass	49.99	1.16	15.83	9.56	8.2	12.79			
KAK1979-017-001	17-1	N/A	Unspecified rock material, whole rock or glass	49.68	0.86	16.38	9.34	9.34	12.15			



Column Chooser X

Method Name

Laboratory

Method Comment

Query by a specific Cruise or Field Program



By Cruise or
Field Program

You can search for samples by the PetDB unique expedition identifier. PetDB Expedition IDs contain names in an alphanumeric structure.

Set Expedition ID

A112-25 ABP0002 ABP0005 ABP0007 ABP0012 ABP0016 ABP1985 AEG1962 AFM0005 AFM0010 AFM0013 AGA1969 AGAVE AGU0007 AGU0022	>> << CLEAR	
---	-------------------	--

Submit

Search by International Geo Sample Number (IGSN)



By IGSN

The IGSN is an alphanumeric code which uniquely identifies samples, sites, stations etc. Enter any known IGSN into the box, and click 'Submit'. Please note: current efforts are underway to significantly increase the number of samples searchable by IGSN.

Set IGSN

IGSN stands for **International Geo Sample Number**. The IGSN is an alphanumeric code that uniquely identifies samples taken from our natural environment (for example: rock specimens, water samples, sediment cores), as well as related sampling features (sites, stations, stratigraphic sections, etc.). [More Info](#).

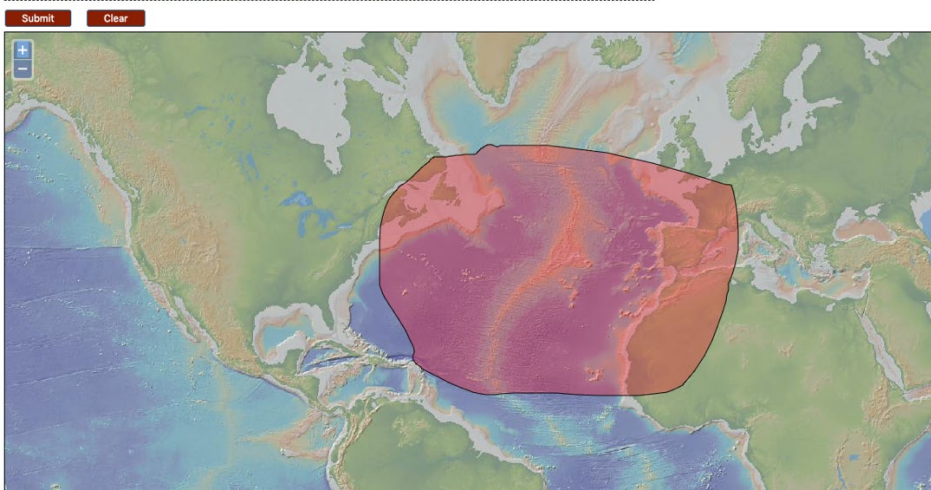
IGSN

Combining Search Criteria

The new PetDB Search has the enhanced capability to combine any number of search parameters. For example, it is possible to define a location using the map polygon, adding the name of a feature, and finally selecting a specific rock type. With each criterion added, the number of samples available will adjust to show those fitting all selected criteria. Below is an example of the results from drawing a polygon in the N. Atlantic, selecting the Mid-Atlantic Ridge, and finally basalt as the rock type.

Polygon Map

Click on the map below to define a search polygon. Click on each vertex of your polygon, double-clicking on the last vertex to close the shape. You can use the zoom bar to zoom in and out. Use shift-click to create a smooth polygon with many vertices.



New Search

Results:

	Classification	Count
<input checked="" type="checkbox"/>	Igneous	5690

Criteria Set:

1. ☒ Location parameters set.
2. ☒ Feature Name(s): SPREADING CENTER : MID-ATLANTIC RIDGE.
3. ☒ Sample Type(s): igneous:volcanic:mafic:basalt.

Downloading Data

From all of the search icons on the search page downloading data is just a few clicks away. Once you have delimited your sample selection:

- Click Download Data
- Choose Material
- Select Analytes
- View and Download Results
- Choose download format

Excel downloads include 2 tabs. The 'Data' tab has metadata such as reference information, geospatial data, methods, material and classification in addition to the chemical data itself. The 'Reference' tab lists author(s), year, title and journal for the data *in your download*.

Selecting Individual vs Pre-Compiled Analyses

Individual analyses

PetDB

CONFIGURE OUTPUT

Samples to Display: ☒ Show samples with any of the checked values defined.
☐ Show samples with all of the below values defined.

File Type to Display: ☒ HTML ☐ Text File ☐ XLSX Spreadsheet View and Download Results

Output Format: ☒ One Row Per Method ☐ One Row Per Sample ☐ Show Methods ☐ Show Units ☐

Choose Chemical Data to Display:

Note: The items shown in bold below actually have values that lie within your search criteria. Those which are not bold do not have any values within your search. You can use the buttons below to choose a set of standard output items to use with multiple downloads.

This option will return a data table that contains all analytical values available for the samples and for the chemical parameters you selected organized by reference and method. This means that each individual row of the result table will contain only those analytical values for a sample that were analyzed with the same method and reported in same reference.

If you select 'Individual Analyses', you will get a table that lists all analyses available for the samples and for the chemical items you selected organized by reference and method. If multiple measurements have been made for a certain chemical item on the same sample (e.g. Nb measured by different methods and published in different papers), they will all be listed in the table. One row in the data table will only contain values from one publication and only data acquired by the same method. *A table with individual analyses will generally report data for the same sample in multiple rows.*

Sample	Majors	H2O	Nb	Rb	Sr	87Sr/86Sr	143Nd/144Nd	Method	Reference
A	XX							XRF	1
B	YY							XRF	1
C	ZZ							XRF	1
A		0.5						WET	1
B		0.4						WET	1
C		0.7						WET	1
A			0.3	2	98			ICPMS	2
B			0.6	1.5	76			ICPMS	2
C			0.5	1.7	82			ICPMS	2
A						0.70305	0.51211	MS	3

B						0.70298	0.51193	MS	3
C						0.70311	0.51205	MS	3
A				1.98	96.8			MS-ID	3
B				1.45	74.2			MS-ID	3
C				1.80	83.5			MS-ID	3

Pre-compiled

PetDB

EarthChem Home About PetDB Help New Search

CONFIGURE OUTPUT

Samples to Display: ☒ Show samples with any of the checked values defined.
☐ Show samples with any of the below values defined.

File Type to Display: ☒ HTML Table ☐ Text File ☐ XLSX Spreadsheet

[View and Download Results](#)

Output Format: ☐ One Row Per Method ☒ One Row Per Sample ☐ Show Methods ☐ Show Units ☐

Choose Chemical Data to Display:

Note: The items shown in bold below actually have values that lie within your search criteria. Those which are not bold do not have any values within your search. You can use the buttons below to choose a set of standard output items to use with multiple downloads.

[Include Standard Output Items](#) [Include Items that Exist in Current Query](#) [Clear All Items](#)

MAJOR OXIDE:	RATIO:	NOBLE GAS:	RARE EARTH ELEMENT:	URANIUM SERIES:	VOLATILE:	TRACE ELEMENT:	STABLE ISOTOPE:
<input type="checkbox"/> SiO ₂ <input checked="" type="checkbox"/> TiO ₂ <input checked="" type="checkbox"/> Al ₂ O ₃ <input type="checkbox"/> Cr ₂ O ₃	<input type="checkbox"/> Fe ₃ P FET <input type="checkbox"/> N(B) <input type="checkbox"/> N(A) <input type="checkbox"/> He ₄	<input type="checkbox"/> He <input type="checkbox"/> He ₂ <input type="checkbox"/> He ₃ N(c) <input type="checkbox"/> He ₄	<input checked="" type="checkbox"/> La <input checked="" type="checkbox"/> Ce <input checked="" type="checkbox"/> Pr <input checked="" type="checkbox"/> Nd	<input type="checkbox"/> ²³¹ Pa <input type="checkbox"/> ²³⁵ U <input type="checkbox"/> ²³⁸ U <input type="checkbox"/> ²³⁴ Th, ²³⁰ Th, ²²⁶ Ra	<input type="checkbox"/> CO ₂ <input type="checkbox"/> CO ₂ U Mol <input type="checkbox"/> F <input type="checkbox"/> Cl	<input type="checkbox"/> Ag <input type="checkbox"/> Al <input type="checkbox"/> As <input type="checkbox"/> Au	<input type="checkbox"/> Delta ⁵⁷ Fe <input type="checkbox"/> Delta ¹⁸ O <input type="checkbox"/> Delta ¹⁵ N <input type="checkbox"/> Delta ¹³ C

This option will return a data table with only one row for each sample that contains a compilation of analytical values measured by different methods or reported in different references. If multiple values for the same chemical parameter exist, one of the values is selected on the basis of rules that we established (see below).

Example: You selected major elements, Nb, Rb, and Sr concentrations, and Sr and Nd isotope ratios for samples A, B, and C. Major elements analyzed by XRF and wet chemistry for these samples were published in reference 1, the trace elements analyzed by ICP-MS in reference 2, isotope ratios by mass spectrometry and Sr and Rb by isotope dilution MS in reference 3.

Sample	Majors	H ₂ O	Nb	Rb	Sr	87Sr/86Sr	143Nd/144Nd	Method	Reference
A	XX	0.5	0.3	1.98	96.8	0.70305	0.51211	XRF, ICPMS, etc	1,2,3
B	YY	0.4	0.6	1.45	74.2	0.70298	0.51193	XRF, ICPMS, etc	1,2,3
C	ZZ	0.7	0.5	1.80	83.5	0.70311	0.51205	XRF, ICPMS, etc	1,2,3

Rules of Data Selection for Pre-Compilation

For isotope ratios:

1. Publication year is compared. The latest value has the highest priority
2. If there is more than one value published in the latest year, standard deviation is used as criteria.

For major elements, rare earth elements and other trace elements:

1. Method: choose the values with highest method priority.
2. If there is more than one value done by the same method (and which has the highest priority among all analyses for that element of that sample), then publication year is compared. The latest value has the highest priority

Method: listed below with priority from high to low.

Major elements:

- XRF: X-RAY FLUORESCENCE
- DCP: DIRECT CURRENT PLASMA
- WET: WET CHEMISTRY
- EMP: ELECTRON MICROPROBE
- ES: EMISSION SPECTROMETRY
- Other

Rare earth elements:

- MS-ID: ISOTOPE DILUTION MASS SPECTROMETRY
- MS: MASS SPECTROMETRY
- ICPMS: INDUCTIVELY COUPLED PLASMA MASS SPECTROMETRY
- DCP: DIRECT CURRENT PLASMA
- SSMS: SPARC SOURCE MASS SPECTROMETRY
- INAA: INSTRUMENTAL NEUTRON ACTIVATION ANALYSIS
- Other

Other trace elements:

- MS-ID: ISOTOPE DILUTION MASS SPECTROMETRY
- MS: MASS SPECTROMETRY
- ICPMS: INDUCTIVELY COUPLED PLASMA MASS SPECTROMETRY
- SSMS: SPARC SOURCE MASS SPECTROMETRY

Feedback

To send Feedback click the black 'Feedback' tab on the right-hand side of a page and complete the feedback form.

Dataset Information

1053-1:PB, SR, AND ND ISOTOPE RATIOS IN BASALTS DREDGED FROM THE MID-ATLANTIC RIDGE, 40-55 DEG S
(DOUGLASS,1999)

Rock Data (66 Rows)

Specimen Code	Specimen Name	IGSN	Material	Pb206_Pb204	Pb207_Pb204	Pb208_Pb204	Method Code	Method Name	Laboratory
EW9309-025-005	EW9309 25D-5	UR9901146	Glass	18.187	15.616	38.735	MS	MASS SPECTROMETRY	UNIVERSITY OF RHO
EW9309-025-001		UR9901144	Glass	18.098	15.599	38.521	MS	MASS SPECTROMETRY	UNIVERSITY OF RHO
EW9309-006-001	EW9309 06D-1	UR9901014	Glass	17.907	15.595	38.185	MS	MASS SPECTROMETRY	UNIVERSITY OF RHO

Feedback

If you have additional questions, please write to us at info@petdb.org.