
Subject: Volume Size

Posted by [Les Butler](#) on Thu, 09 Apr 1998 07:00:00 GMT

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Hi,

As a newcomer to the world of IDL (I have been using it for three weeks!) I would like to know if there is any way that IDL can be used to measure the percentage volume of an object. To use a geological example - can I find out the percent-volume of the pores in a rock?

Most of our data is stored as 2D 'slices' as .cdf files and then constructed into a 3D common block form in IDL

Any information on this subject will be greatly appreciated.

comments can be posted here or E-Mailed to me at :

wales@chrs1.chem.lsu.edu

or call me on (504) 388 4416

Thanks

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Subject: Re: Volume Size

Posted by [a2652099](#) on Sun, 12 Apr 1998 07:00:00 GMT

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davidf@dfanning.com (David Fanning) wrote:

```
>> Presumably you can distinguish the pores by some "value"
>> in the 3D volume. Suppose the pores had values less than
>> 10 and the rock (rest of the 3D volume) had values greater
>> than 10. Then calculating the percentage volume of the pores
>> is as simple as this:
>>
>> pores = Where(volume LE 10)
>> percent_pores = N_Elements(volume[pores])/N_Elements(volume)
>
```

> And what I *should* have written is this:

>

> `percent_pores = FLOAT(N_Elements(volume[pores]))/N_Elements(volume)`

>

> Or you will be looking at a 0 percent, always!

To avoid the slow WHERE function I'd suggest

```
percent_pores = 1.0 * Total( volume LE 10 ) / N_Elements( volume )
```

Alex

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PGP Key available