# Datapharm API: A How To

## For MedHand

## Version 1.0

# 1.    Contents

# 2. Document Information

The particulars given in this section are required for document control. The document is correct and accurate at time of publication but if there are any issues please contact the author.

## 2.1 Document Responsibility

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## 2.2 Change History

| Date | Change Version | Details/Change | Authored | New Version |
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## 2.3 Distribution List

| Name | Title / Role | Action on this document |
|------|--------------|-------------------------|
| MedHand | Customer | Knowledge base |

## 2.4 Document Approval

| Name | Date |
|------|------|
| John Moreland | 31/07/17 |

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# 4.  Introduction

The purpose of this document is to provide MedHand with a concise "How To" guide for leveraging the Datapharm API in order to retrieve medicines information from the eMC.

# 5.    Accessing the API

We recommend using Fiddler (http://www.telerik.com/fiddler) or a similar tool to test queries.  The information that follows provides the calls required to download information from our API using Fiddler.  If you are using another tool please modify the API calls as appropriate.

Note that there are security restrictions around the use of the API and **ALL** requests to the API must be accompanied with an API Key (ApiKey) in the request header.

The API key for MedHand is:

<div align="center">

`17B9D964FDAA8145AC86A3AAD825F2CD`

</div>

The information you can retrieve from Datapharm's API will be limited by your licence. You will be able to retrieve Summaries of Product Characteristics (SPCs) content & metadata.

Below is an example that can be used in Fiddlers scratchpad:

> GET http://api.medicines.org.uk/v1/documents/97 HTTP/1.1
> User-Agent: Fiddler
> Host: api.uat05.medicines.org.uk
> ApiKey: `17B9D964FDAA8145AC86A3AAD825F2CD`

# 6.    Restrictions on use of the API

Please consider the following when accessing the API:

- Restrict requests to a maximum of two per second
- Restrict large numbers of requests (e.g. initial database population) to the API to after 8pm (BST) or at the weekend
- Perform regular updates to ensure your data is up-to-date **– timeline to be mutually agreed**

# 7.    How to use the eMC API

You can request content via a simple API calls.  The format is:

```
http://api.uat05.medicines.org.uk/v1/{resource}/{resourceid}
```

More specific examples will be given later in this document.

# 8.    Populating and Maintaining Your Database

The first thing to do is to populate your database by making calls to the API for all relevant data.  As there is a significant amount of data, several calls will need to be made using the paging function to ensure the full dataset is returned.

To maintain the database you will want to make regular calls to the eMC API. We will agree a frequency of update that works for you that does not violate the terms of use of the API.

The suggested process to create and maintain your database is

1. Retrieve SPC metadata – This will require use of the paging function
2. Retrieve SPC content files – This will use the links supplied within the metadata
3. Handle new and updated SPCs – There can be between 10-20 new or updated SPCs each weekday
4. Handle retired SPCs - a retired SPC is a one that is no longer available from the eMC and you should remove it from your database.

## 8.1 Retrieve SPC Metadata

Download all SPC metadata to populate your initial database.

```
http://api.uat05.medicines.org.uk/v1/documents?state=authorised
```

The response will provide the following information:

- TotalRecords
- TotalPages (given the default of 100 per page)
- The first 100 records

Product information is provided 100 records at a time so you will need to make more than one call to ensure that all data is received. This will require use of the eMC API paging function as demonstrated below:

1. http://api.uat05.medicines.org.uk/v1/documents?state=authorised
2. http://api.uat05.medicines.org.uk/v1/documents?state=authorised&offset=101
3. …/documents?state=authorised&offset=201

Each increment of the offset will deliver an additional 100 results so repeat as necessary

Now that you have all of the meta-data, it's time to download the content of the SPC.

The following sections detail how to download the content for each SPC.

## 8.2 Retrieve SPC Content

For each document that you have retrieved, the meta-data will have provided a "ContentURL" attribute. The attribute contains a link to where the actual SPC can be downloaded from e.g.

```
http://api.uat05.medicines.org.uk/v1/spcs/19377
```

Note that you will need to make a call to the API for every SPC you require.

### 8.3 Handle new and updated SPCs

Regular calls will need to be made to the eMC API in order to maintain the recency of your database. The maintenance interval will be detailed in your licence agreement.

The suggested API call is given below

```
http://api.uat05.medicines.org.uk/v1/
documents?daysoffset=1&lastmodifieddateto=YYYY-MM-DD
```

The number of offset days must be a whole number. It is suggested that the 'daysoffset' is set to '1', that 'lastmodifieddateto' is set to the present date and that a call is made every three to eight hours to balance recency of information with processing.

The above API call will return the metadata for all new and updated SPCs in the time period specified. Subsequent requests should then be made to obtain the SPC content.

### 8.4 Handle Retired SPCs

In addition to newly added or updated SPCs, it is necessary to understand when a SPC has been retired from the eMC so that it can be removed from your database.

The suggested API call is given below

```
http://api.uat05.medicines.org.uk/v1/
documents?fields=id,state,title,retireddate&state=retired&days
offset=1&lastmodifieddateto=YYYY-MM-DD
```

As for new and updated SPCs, we suggest that this call is made several times a day to ensure that retired SPCs are removed from your database promptly.

**Note:** When maintaining your database, if the number of results for a call is greater than 100 then you will need to use the paging function as described previously.

# 9. Interpreting the data

The information supplied from the API consists of both the SPC content and its attributes (metadata).

When the initial calls are made to populate your database the following information will be returned:

- Document id – a unique identifier
- Document title – the title of the document
- Document type -  This will always be "SPC"
- Company Name – Name of the company who supplied the information to the eMC
- Active Ingredients –  A list of name(s) of the active ingredient(s)
- Legal Categories – The legal category of the medicine (see below)
- Authorisation Date – The date SPC was approved for publishing on the eMC
- Last Modified Date – The date that any piece of the related meta-data or document was changed in any way
- Retired Date – If retired, the date the SPC was removed from the eMC
- Content URL – Link to retrieve the SPC content
- State – Whether the SPC is published (authorised) or removed (retired) from the eMC

Note that not every field will have a value, some may be blank or have a value of (null).

## 9.1 Definitions of Legal Categories

**GSL -** These can be bought from pharmacies, supermarkets and other retail outlets without the supervision of a pharmacist. They are sometimes referred to as over-the-counter medicines.

**POM** – These medicines need a prescription issued by a GP or another suitably qualified healthcare professional.

**P** - Pharmacy medicines are available from a pharmacy without a prescription, but under the supervision of a pharmacist. These medicines are kept behind the counter and are not available on the pharmacy shelves. The pharmacist will check the medicine is appropriate for consumer and their health problem. They will ask questions to ensure there is no reason why the consumer should not use the medicine.

# 10. Sample JSON Response

An example of the response obtained from the eMC API is shown below. Only one SPC record are shown for brevity

```
https://api.uat05.medicines.org.uk/v1/documents
```

**Note:** The examples below show responses with one or multiple AMP codes and dm+d Descriptions,

```json
{
  "Limit": 100,
  "Offset": 1,
  "TotalRecords": 13186,
  "TotalPages": 132,
  "Message": null,
    "Resource": {
        "ActiveIngredients": [
            {
                "Id": 1248,
                "Name": "salbutamol sulfate"
            }
        ],
        "Company": {
            "Id": 755,
            "Name": "GlaxoSmithKline UK"
        },
        "LegalCategories": [
            {
                "Id": 1,
                "Name": "POM"
            }
        ],
        "Id": 97,
        "Title": "Ventolin Accuhaler",
        "Type": "SPC",
        "State": "Authorised",
        "AuthorisationDate": "2015-08-03T14:24:00.963",
        "RetiredDate": "0001-01-01T00:00:00",
        "LastModifiedDate": "2015-08-03T14:24:00.963",
        "ContentUrl": "http://api.uat05.medicines.org.uk/v1/spcs/97"
    }
}
```