



EUROPEAN MEDICINES AGENCY  
SCIENCE MEDICINES HEALTH

## Product Management Service (PMS) Public API – Frequently Asked Questions (FAQs)

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### **Disclaimer**

The FAQs are split per topic.

Nothing in this document should be taken as an explicit commitment on behalf of the EMA, or the PMS product team. The responses represent the expert view of the Product team and are not official statements by the European Medicines Agency nor its partners.

For convenience, many technical terms are explained in the table of abbreviations at the beginning of this document.

For general inquiries, please contact the PMS team via the [EMA Service Desk](#).

For questions or comments around the content of this FAQ document, please raise a ticket via the [EMA Service Desk](#).

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## Acronym key and glossary terms

<b>API</b>	Application Programming Interface
<b>EMA</b>	European Medicines Agency
<b>EU IG</b>	EU IDMP Implementation Guide
<b>NCA</b>	National Competent Authority
<b>PLM</b>	Product Lifecycle Management
<b>PMS</b>	Product Management System
<b>PUI</b>	Product User Interface

# 1. Getting started

## 1.1. What is the PMS Public API?

The PMS Public API provides registered users with access to public medicinal product data managed by the European Medicines Agency (EMA) through the Product Management Service (PMS). The API exposes product information in FHIR R5 (5.0.0) format for National Competent Authorities, industry stakeholders, and the general public. Access to the API requires prior registration, as described in the following section.

## 1.2. Where can I find the API documentation and try it out?

The Swagger UI is available at <https://api.pms.ema.europa.eu/public/v1/swagger>. The Swagger UI is interactive and allows direct request execution.

Additional documentation related to the Public PMS API such as the registration process can be found in [EU IG Chapter 1](#).

## 1.3. What is the base URL for the API?

<https://api.pms.ema.europa.eu/public/v1>

Please note that plain HTTP is not supported.

## 1.4. How does the PMS Public API differ from the PMS API and PMS User Interface (PUI)?

The PMS API and the PMS user interface support registered-user access to public and confidential medicinal product data. These two platforms are to be used by NCAs and Industry stakeholders. The PMS Public API exposes a limited public dataset intended for external consumption through a dedicated public interface.

# 2. Authentication & Access

## 2.1. Do I need to register or authenticate to use the API?

Yes. Users must request OAuth2 credentials through the [EMA Account Management \(EAM\) Portal](#). After registration, requestors will receive a Client ID, Client Secret, Display Name, and Key ID by email, which requestors use to obtain a Bearer token via a POST request to the token endpoint. Tokens are valid for 1 hour (3600 seconds). After that period, in order to obtain another Bearer token, renew the POST request.

## 2.2. How do I authenticate my requests?

Include the Bearer token in the Authorization HTTP header: Authorization: Bearer {token}. While using an API development and testing tool, set the authorization type to "Bearer Token" and paste the provided token.

## 2.3. What roles are required to access the API?

The token must include the roles PMS-PUBLIC-USER and PMS-SEARCH-VIEW-EXPORT.

# 3. Data Scope

## 3.1. What products are available through the API?

Only non-nullified **human** medicinal products are available.

### **3.2. What happens when a product's status changes?**

The availability of a product in the API is determined by its lifecycle status. When a product is nullified, it is no longer exposed through the API, and requests for its ID return a **404 Not Found** response. If the product subsequently transitions to a non-nullified status, it is automatically made available through the API again and can be retrieved using the same ID.

### **3.3. What data is considered confidential and excluded?**

Confidential data elements are excluded from the public dataset. This includes manufacturer information and excipient ingredient strength values. See [EU IG Chapter 5, Annex A](#) for the full list and the public/confidential classification.

### **3.4. What FHIR version does the API use?**

The API conforms to **HL7 FHIR R5 (5.0.0)**.

## **4. Endpoints**

### **4.1. What endpoints are available?**

There are two endpoints:

- **Search:** GET /MedicinalProductDefinition?{search\_params} — searches for products by various criteria and returns a FHIR Bundle that contains the PMS ID of the products that fulfill the search criteria.
- **Get by ID:** GET /MedicinalProductDefinition/{id}/\$everything — returns a complete FHIR Bundle with the product and all related resources (packaging, authorisation, ingredients, etc.).

### **4.2. What related resources are included in the \$everything response?**

PackagedProductDefinition, RegulatedAuthorization, AdministrableProductDefinition, Ingredient. For a complete reference of available data fields and their FHIR paths, consult

<https://api.pms.ema.europa.eu/public/v1/swagger>

## **5. Searching**

### **5.1. What can I search by?**

Search can be done by product name, identifier (PMS ID), status, last updated date, authorised dose form, ATC classification, substance code, substance with strength, package ID, marketing authorisation number (at product or package level), country of authorisation, marketing authorisation holder, regulator, procedure type, and procedure number. For a complete reference of available data fields and their FHIR paths, see Data Elements Reference in <https://api.pms.ema.europa.eu/public/v1/swagger>.

### **5.2. How do I search by multiple values for the same parameter?**

Separate values with commas for **OR** logic (e.g., identifier=PRD2589182,PRD3352212 returns products matching either). Supply the same parameter multiple times for **AND** logic (e.g., identifier=PRD2589182&identifier=PRD3352212 returns only products matching both).

### **5.3. How does the `_lastUpdated` filter work?**

Only the `gt` (greater than) prefix is supported. It accepts date only (`gt2024-01-15`, assumes midnight UTC), datetime with UTC (`gt2024-01-15T10:30:00Z`), or datetime with a European timezone offset (e.g., `+02:00` for CEST). If no timezone is specified, UTC is assumed.

### **5.4. How do the substance-with-strength search parameters work?**

Use `$` to separate the SMS Substance ID from the strength, and `|` to separate values within the strength. For example: `_has:Ingredient:for:substance-code-presentation-strength=100000090365$100|100000110655|1|200000002152`.

### **5.5. Can the full PMS Public API dataset be downloaded?**

Bulk-download mechanism is not available at release. The search endpoint supports only paginated retrieval, with a maximum of 100 results per page. Requests attempting to retrieve more than approximately 100,000 products may fail because of service-side search limits. Where broad retrieval is required, filtered queries should be used to reduce the result set.

### **5.6. What is the recommended approach for large-scale data retrieval?**

Incremental retrieval should be preferred over repeated full downloads. The `_lastUpdated` parameter with the `gt` prefix supports delta queries and is better aligned with the intended usage pattern. Where broader retrieval is required, query filters should be used to partition the dataset into smaller result sets. For example, country-based filters can be used to retrieve data in separate batches so that each query remains below the service-side search limit. A future export capability based on `$export` and periodic ZIP generation is planned.

## **6. Response Format**

### **6.1. What response format are supported?**

FHIR JSON (`application/fhir+json`, the default) and FHIR XML (`application/fhir+xml`). If an unsupported format is requested, the API returns 406 Not Acceptable.

## **7. Pagination**

### **7.1. How does pagination work?**

Use `_count` to set results per page (default 10, max 100). The response includes a `Bundle.link` with `relation = "next"` containing a continuation token. Pass this token as the `_ct` parameter in subsequent requests. Continue paginating until no next link is returned.

### **7.2. How do I sort results?**

Use `_sort` with accepted values: `name`, `-name`, `id`, `-id`, `lastUpdated`, `-lastUpdated`. Prefix with `-` for descending order. Default is ascending.

## 8. Rate Limiting & Caching

### 8.1. Are there rate limits?

Yes. The API enforces **500 requests per minute per IP address**. If the limit is exceeded, a 429 Too Many Requests response is returned together with a Retry-After header indicating the required wait time before the next request is permitted.

### 8.2. Is the data cached? How fresh are the responses?

Responses are cached for **24 hours** for both search and get-by-ID endpoints. This means recently updated product data may take up to 24 hours to appear. Note that `_lastUpdated` search results reflect the database state, but `$everything` responses for the same product may still return cached data until the cache expires.

### 8.3. What is the propagation latency for PMS data updates in the Public API?

The visibility of updates depends on the access pattern. When a product is retrieved directly by PMS ID and the response is not served from cache, the update is available immediately. When the product is retrieved through a parameter-based search, the update may not appear for up to 1 hour while the search index is refreshed. Cached responses may remain unchanged for up to 24 hours.

## 9. Rate Limiting & Caching

### 9.1. Where do the numeric codes used in search parameters come from?

The API references three [SPOR data domains](#):

- **RMS** (Referentials Management Service): for status, dose form, country, classification codes, etc.
- **OMS** (Organisations Management Service): for marketing authorisation holder and regulator, referenced by Location ID (e.g., LOC-100047650).
- **SMS** (Substances Management Service): for substance data, referenced by Substance ID.

### 9.2. Can I retrieve just a count of matching products without the full data?

Yes. Use `_summary=count` to get only the total number of matching products and metadata, without the full product bundles.

## 10. Errors & Troubleshooting

### 10.1. What HTTP status codes should I expect?

200 OK (success)

400 Bad Request (invalid parameters),

401 Unauthorized

403 Public user role missing

404 Not Found (product ID doesn't exist),

406 Not Acceptable (unsupported Accept header)

429 Too Many Requests (rate limit exceeded)

500 Internal Server Error

**10.2. My token was rejected – what should I check?**

Verify that the client\_id and client\_secret are correct (a 401 Unauthorized response indicates incorrect credentials), confirm that the scope is valid (a 400 Bad Request response indicates an incorrect scope), and check that the Bearer token has not expired (expired tokens produce a specific error message) - see section 5 for instructions on obtaining another Bearer token

The requested credentials submitted via EAM portal can be checked under "Track my Requests".

Please note that the client secret has a validity of 2 years after which a ServiceNow ticket needs to be raised to request a new secret.

## **11. Terms of Use**

**11.1. Are there terms and conditions for using the API?**

Yes. Usage is subject to the [Public PMS API Terms and Conditions of Use](#).