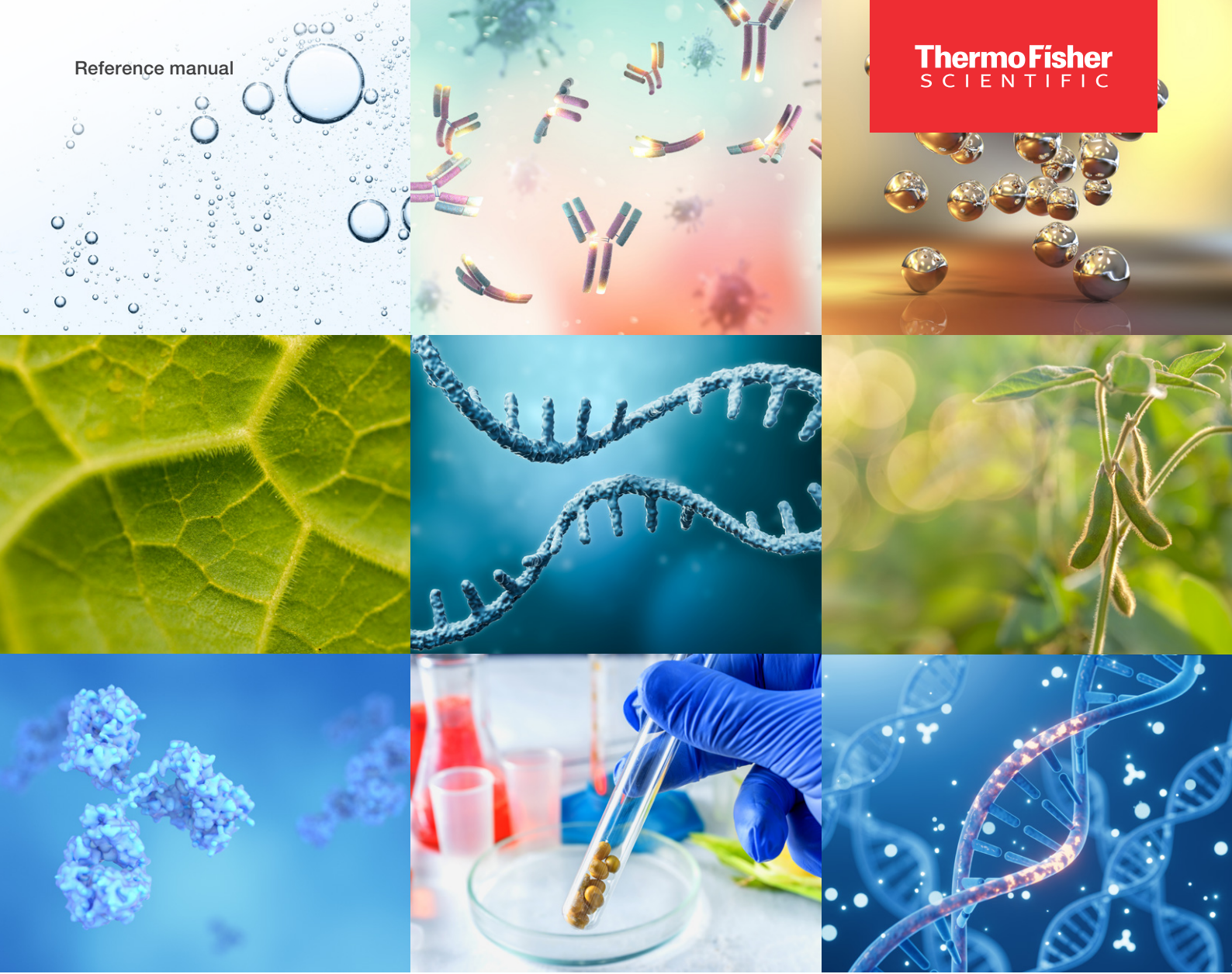


Reference manual

**ThermoFisher**  
SCIENTIFIC



# NanoDrop Ultra API Reference Manual

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# Introduction

Welcome to the NanoDrop Ultra Web API Reference Manual. This document provides detailed information about the various endpoints available in the NanoDrop Ultra Web API, including the methods, parameters, request bodies, and responses. The API is designed to enable developers to interact with the NanoDrop Ultra programmatically, allowing for the creation, retrieval, updating, and deletion of resources such as experiments, measurements, standard references, and user methods, etc.

## Getting Started

To use the NanoDrop Ultra Web API with the SciVault 2 compliance software, you must obtain an API key and include it in your requests for authentication. Ensure that your HTTP client is configured to handle JSON responses and that you are familiar with standard HTTP methods like GET, POST, PUT, and DELETE.

## Base URL

All API endpoints are relative to the following base URL. Please replace localhost with the appropriate IP address or computer name for your specific environment.

```
http://<localhost>:54011/
```

## Authentication

All requests to the NanoDrop Ultra Web API must include an API key for authentication if SciVault 2 software is enabled. You can pass the API key in the Authorization header as follows:

```
Authorization: Bearer YOUR_API_KEY
```

## Request and Response Formats

The API expects request bodies to be in JSON format and will return responses in JSON format. Ensure that the **Content-Type** header is set to `application/json` for requests that include a body.

## Common Response Codes

- **200 OK:** The request was successful.
- **201 Created:** The resource was successfully created.
- **204 No Content:** The request was successful, but there is no content to return.
- **400 Bad Request:** The request was invalid or cannot be otherwise served.
- **401 Unauthorized:** Authentication is required and has failed or has not been provided.
- **404 Not Found:** The requested resource could not be found.
- **500 Internal Server Error:** An error occurred on the server side.

# API Endpoints

The following sections describe the available API endpoints in detail. Each endpoint includes information about the HTTP method, path parameters, query parameters, request body, and responses.

This introduction provides a clear and professional overview of your API, helping users understand how to get started and what to expect. You can customize and expand this section as needed to fit the specific details of your API.

## Experiment

- [DELETE /Experiment](#)
- [GET /Experiment/Detail/Id/{id}](#)
- [GET /Experiment/Id/{id}](#)
- [GET /Experiment/Query](#)
- [PUT /Experiment/UpdateName/{id}](#)
- [POST /Experiment/UploadPathAsync](#)
- [POST /Experiment/UploadPath](#)

## Measurement

- [DELETE /Measurement/ExperimentId/{experimentId}](#)
- [GET /Measurement/FindPeak](#)
- [GET /Measurement](#)
- [PUT /Measurement/UpdateName/{id}](#)
- [PUT /Measurement/UpdateQpcr/{id}](#)

## StandardReference

- [POST /StandardReference/{category}](#)
- [GET /StandardReference/Id/{id}](#)
- [POST /StandardReference](#)

## System

- [GET /System](#)

## UserMethod

- [DELETE /UserMethod](#)
- [POST /UserMethod/Generate/{userMethodId}](#)
- [GET /UserMethod/Id/{id}](#)
- [POST /UserMethod](#)
- [PUT /UserMethod](#)
- [GET /UserMethod/Query](#)
- [POST /UserMethod/Upload](#)

## Experiment

DELETE /Experiment

### Request body

body UUID

### Responses

200

Success

GET /Experiment/Detail/{id}

### Path parameters

id (required)

*Path Parameter* — format: uuid

### Responses

200

Success

GET /Experiment/Id/{id}

### Path parameters

id (required)

*Path Parameter* — format: uuid

### Responses

200

Success

GET /Experiment/Query

### Query parameters

NameFilter

*Query Parameter* — format:string

ApplicationFilter

*Query Parameter* — format:string

PageNumber

*Query Parameter* — format: int32

PageSize

*Query Parameter* — format: int32

StartTimeStamp

*Query Parameter* — format: int64

EndTimeStamp

*Query Parameter* — format: int64

StartTime

*Query Parameter* — format: date-time

EndTime

*Query Parameter* — format: date-time

### Responses

200

Success

PUT /Experiment/UpdateName/{id}

### Path parameters

id (required)

*Path Parameter* — format: uuid

### Request body

body string

### Responses

200

Success

POST /Experiment/UploadPathAsync

### Request body

body string

### Responses

200

Success

POST /Experiment/UploadPath

### Request body

body string

### Responses

200

Success

## Measurement

DELETE /Measurement/ExperimentId/{experimentId}

### Path parameters

experimentId (required)

*Path Parameter* — format: uuid

### Request body

body UUID

### Responses

200

Success

GET /Measurement/FindPeak

### Query parameters

MeasureQuantId

*Query Parameter* — format: uuid

PeakStartX

*Query Parameter* — format: double

PeakEndX

*Query Parameter* — format: double

PeakThresholdY

*Query Parameter* — format: double

MaxPeaks

*Query Parameter* — format: int32

IsSmooth

*Query Parameter* — format: boolean

### Responses

200

Success

## GET /Measurement

### Query parameters

experimentId

*Query Parameter* — format: uuid

startPage

*Query Parameter* — format: int32

pageCount

*Query Parameter* — format: int32

### Responses

200

Success

## PUT /Measurement/UpdateName/{id}

### Path parameters

id (required)

*Path Parameter* — format: uuid

### Query parameters

newName — format: string

### Responses

200

Success

## PUT /Measurement/UpdateQpcr/{id}

### Path parameters

id (required)

*Path Parameter* — format: uuid

### Query parameters

TotalReactionVolume

*Query Parameter* — format: double

PrimerProbeAndMasterMixVolume

*Query Parameter* — format: double

TemplateConc

*Query Parameter* — format: double

TemplateConcUnit

*Query Parameter* — format: string

### Responses

200

Success

## StandardReference

### POST /StandardReference/{category}

### Path parameters

category (required)

*Path Parameter* — format: int32

### Request body

body string

*Body Parameter* — format: string

## Responses

200

Success

## GET /StandardReference/Id/{id}

### Path parameters

id (required)

*Path Parameter* — format: uuid

### Responses

200

Success

## POST /StandardReference

### Request body

body [StandardReference](#)

### Responses

200

Success

## System

### GET /System

### Responses

200

Success

## UserMethod

### DELETE /UserMethod

### Request body

body UUID

### Query parameters

methodType

*Query Parameter* — format: string

### Responses

200

Success

## POST /UserMethod/Generate/{userMethodId}

### Path parameters

userMethodId (required)

*Path Parameter* — format: uuid

### Request body

body map

*Example Value | Schema*

```
{
  "additionalProp1": "string",
  "additionalProp2": "string",
  "additionalProp3": "string"
}
```

## Query parameters

userMethodId

*Query Parameter* — format: uuid

## Responses

200

Success

GET /UserMethod/Id/{id}

## Path parameters

id (required)

*Path Parameter* — format: uuid

## Responses

200

Success

POST /UserMethod

## Request body

body [UserMethod](#)

## Responses

200

Success

PUT /UserMethod

## Request body

body [UserMethod](#)

## Responses

200

Success

GET /UserMethod/Query

## Query parameters

NameFilter (optional)

*Query Parameter* —

TypeFilter (optional)

*Query Parameter* —

PageNumber (optional)

*Query Parameter* — format: int32

PageSize (optional)

*Query Parameter* — format: int32

StartTimeStamp (optional)

*Query Parameter* — format: int64

EndTimeStamp (optional)

*Query Parameter* — format: int64

StartTime (optional)

*Query Parameter* — format: date-time

EndTime (optional)

*Query Parameter* — format: date-time

## Responses

200

Success

POST /UserMethod/Upload

## Consumes

This API call consumes the following media types via the Content-Type request header:

- multipart/form-data

## Form parameters

formFile

*Form Parameter* — format: binary

collection

*Form Parameter* — format: binary

## Responses

200

Success



## Schemas

1. [CommonStandard](#)
2. [CommonStandardModel](#)
3. [Measurement](#)
4. [ReferenceCategoryEnum](#)
5. [StandardReference](#)
6. [UserMethod](#)

### CommonStandard

Id	<i>String</i>
Name	<i>String</i>
ResultList	<i>array[Double]</i>
AverageResult	<i>Double</i> format: double
Concentration	<i>Double</i> format: double

### CommonStandardModel

Standards	<i>array[<a href="#">CommonStandard</a>]</i>
CurrentStandardIndex	<i>Integer</i> format: int32
StandardConcentration	<i>Double</i> format: double
ConcentrationUnit	<i>String</i>
StandardCount	<i>Integer</i> format: int32
CurrentReplicate	<i>Integer</i> format: int32
ReplicateCount	<i>Integer</i> format: int32
CanMeasureSample	<i>Boolean</i>
Equation	<i>String</i>
CurveType	<i>String</i>

### Measurement

Id	<i>UUID</i> format: uuid
ExperimentId	<i>UUID</i> format: uuid
Type	<i>String</i>
SampleName	<i>String</i>
MeasuredTime	<i>Date</i> format: date-time
LocalMeasuredTime	<i>Date</i> format: date-time
OriginMeasuredTime	<i>Date</i> format: date-time
TimeOffset	<i>String</i>
Location	<i>String</i>
SettingJson	<i>String</i>
DataJson	<i>String</i>
ExtraJson	<i>String</i>
MeasurementBatch	<i>Long</i> format: int64
IsDiscarded	<i>Boolean</i>

### ReferenceCategoryEnum

Enums:

[ 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10]

### StandardReference

Id	<i>UUID</i> format: uuid
ExperimentId	<i>UUID</i> format: uuid
ExperimentName	<i>String</i>
ExperimentDate	<i>Date</i> format: date-time
TimeOffset	<i>String</i>
Type	<i>String</i>
Category	<a href="#">ReferenceCategoryEnum</a>
User	<i>String</i>
ReferenceIds	<i>String</i>
StandardMeasurements	<i>array[<a href="#">Measurement</a>]</i>
MethodParameters	<a href="#">CommonStandardModel</a>
ExtraJson	<i>String</i>

### UserMethod

Id	<i>UUID</i> format: uuid
Name	<i>String</i>
Description	<i>String</i>
Type	<i>String</i>
Author	<i>String</i>
LastUpdatedBy	<i>String</i>
CreationTime	<i>Date</i> format: date-time
UpdateTime	<i>Date</i> format: date-time
TimeOffset	<i>String</i>
ExtraJson	<i>String</i>

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