# EdamamAPI

## Introduction

Edamam organizes the world’s food knowledge in one central database and delivers value added services, such as real-time nutrition analysis and diet-driven meal recommendations. The company leverages the power of data and technology to help people eat better and live healthier and happier lives.

Edamam can help with specific dietary requirements that otherwise limit what a person can eat. It can also help with people uninspired to cook at home offering a huge variety of recipes, while providing nutritional analysis.

Too often, people on a strict diet get into a rut and gravitate towards the same few meals they consider “safe.” This gets boring and results in overall poor nutrition, as the diet lacks variety and balanced intake of all nutrients. To break out of the rut and open a world of options for meals that fit any diet need, the Edamam Recipe Finder is the fastest way to find high quality recipes from a database of 1.5 million nutritionally analyzed recipes. Whether the user minds calories or needs to track a specific nutrient such as sugar, cholesterol or sodium, the Recipe Finder will present the best recipes that fit his needs. The Recipe Finder will:

* Surface the highest quality recipes from around the web, which fit the desired parameters
* Show the ingredient list of the recipe and its full nutrient content, and
* Provide a link to the recipe for cooking instructions

About half the meals an average person gets are cooked and eaten at home. Finding out the nutrient content and intake of those meals is virtually impossible. Edamam however provides a solution to this. The Nutrition Wizard analyzes, in real-time, the nutrition of any recipe or ingredient list. For people who care about calories and nutrient intake, it solves the problem of tracking and adjusting nutrient needs for the meals they cook and eat at home. Over time, it leads to healthier eating habits. The Nutrition Wizard is an easy to use tool to perform nutrition analysis of recipes or ingredient lists. It is intuitive and instantaneous. The user simply:

* Enters an ingredient list or a recipe in a natural language (either type or copy/paste)
* Selects number of servings
* Hits “Analyze”

and almost instantly, the Nutrition Wizard will produce detailed data about calories, macronutrients (fats, carbs and protein) and 20+ micronutrients (cholesterol, sodium, vitamins, etc.).1

## Use Cases for EdamamAPI

### Food Logging for Diabetic App

Consumers with health or diet conditions need an easy, one click way, to save into their food log the foods they have eaten during the day. Currently, they are limited to searching for foods and using dropdown menus which makes them unlikely to maintain a food diary.

Edamam’s Food Database API can send simple sentences and get back structured food data with nutrition. For example, “I had fish and chips” becomes immediately an actual food with serving size and full nutrition. With natural language processing there are no more drop-down menus.

DiabetesM, a leading diabetes aid app, is using the Food Database API food-logging context.

### Food Database for calorie counting

Most calorie counting apps rely on the tried and tested food search functionality. Customers search for a food and then select the right choice from a dropdown list. For this to work well they need a vast database of product so that they can always find the product they are looking for.

Edamam has compiled a database of over 900,000 foods. If the user is looking for a food they bought from the supermarket or if they are eating out at a restaurant they are in good hands. Edamam’s database contains virtually all foods they can eat in a fast food restaurant, buy in store or take out from their local eatery. What is more they can search for foods which are good for them by using Edamam’s filters for allergies and diets.2

# Edamam APIs

## Nutrition Analysis API

### Specifications

The Nutrition Analysis API uses Natural Language Processing and semantically structured data. It is considered the most advanced nutrition analysis technology available by their creators. It offers the following:

* Full recipe nutrition analysis
  + Submit the full text of any recipe or ingredient list. Edamam will extract the full nutrition and ingredient data from the text. The nutrition analysis takes less than a second.
* Text Analysis
  + The Natural Language Processing engine allows for the extraction of food named entities from text. Combined entity extraction with food database search is also allowed. Once a text is submitted and entities are extracted the database is searched for additional food matches to the extracted entities.
* Structured data and nutrition data output
  + Edamam returns detailed information for each ingredient line for the Recipe Analysis and for each text string for the Text Analysis. You can get information for the entire recipe as a whole or broken down automatically for each ingredient
  + For each food (flour, eggs, flour etc.), Edamam returns data for calories, fats, carbohydrates, protein, cholesterol, sodium, etc. for a total of 28 macro and micronutrients.
  + All food nutrient data is enriched with diet, allergy and health labeling, as calculated by Edamam based on the food's ingredients. Vegan, Paleo, Gluten Free, Low-Sodium, and Dairy Free are some of the 90+ claims generated automatically.
* Data Caching
  + The terms of use of the Edamam Data are covered in the API Terms of Use and do not permit data caching unless explicitly permitted by Edamam. The data caching described here does not constitute permission to copy or reuse the Edamam data.
  + Data caching is allowed for some paid API plans when explicitly stated by the plan’s terms. API customers can cache only the four basic macro nutrient data points - protein, total fat, net carbs, and calories. Saved data can be used only in the end user’s account, behind a password. The caching as described here does not allow customers to build a copy of the Edamam data to be reused in any form or to build a food search. The API still provides full nutrient data which can be displayed on call without caching and customers can only cache the nutrients described above. Active subscription to an eligible plan is required as long as the data is used as well as attribution to Edamam.
* Low-cost solution
  + Edamam provides free recipe nutrition analysis and text analysis with its basic plan for developers, startups and non-profits alike.
  + Enterprise customers are charged a very low monthly licensing fee for recipe analysis based on usage. Custom packages are also available.

### Access

The Edamam B2B API is accessed by sending HTTPS requests on specific URLs as described below. The base URL is https://api.edamam.com, and the full URL is obtained by appending request’s path to the base URL. This API covers all key use cases related to recipe and food text natural language processing and nutrition analysis. The API employs NLP (Natural Language Processing) which allows for extraction of food entities from unstructured text.

### Covered Use Cases

* Full analysis of food recipes in real time – entity extraction, measure and quantity extraction with computation of the applicable nutrition for the recipe and applicable health and diet labels. Finally, it adjusts quantity for certain ingredients to account for the cooking process. For example, it calculates oil absorption for fried recipes, excludes solids from stock and broth recipes, calculates marinate absorption for marinates and much more.
* Extraction of food entities with measures and quantities from unstructured text.
* Usage in chatbots transcribing natural speech to text.

### Food Logging

As stated in the specifications, the food logging feature can be enabled by changing the “nutrition-type” parameter in the Nutrition Data GET request to “logging.” The food logging context feature it will modify the NLP response in the following ways:

* User can submit items without quantity. Edamam will try to match them and assign quantity to them based on expected serving size
* Only foods ready for direct consumption will be matched – no raw meats, raw dry goods or vegetables which need cooking for example
* Edamam can handle single items and two part compound items only – i.e. “chicken” or “rice AND chicken”. Make sure the URL is encoded properly

## Food and Grocery Database API

### Specifications

* The Food API uses Natural Language Processing and semantically structured data.
  + Each search string the user inputs in the API goes through Edamam's proprietary natural language analysis engine. Food entities are found and quantities are attached to them when available.
  + In Food Logging mode the API allows for development of food logging chatbots. All text is analyzed and quantities of the food are estimated on the fly.
  + With Edamam's Food Database API you can use the native iOS or Android voice recognition for one click data entry. No more drop downs and search boxes are required.
* Food database
  + Edamam provides access to a food and grocery database with close to 900,000 basic foods, restaurant items and consumer packaged foods
  + The foods in the Food API can be filtered by Diet and health filters generated by Edamam. All food database data is enriched with diet, allergy and nutrition labeling, as calculated by Edamam based on the food's ingredients. Peanut Free, Shellfish Free, Gluten Free, Vegan, and Vegetarian are some of the 70+ claims generated automatically.
  + For basic foods from the food database (flour, eggs, flour etc.), Edamam returns data for calories, fats, carbohydrates, protein, cholesterol, sodium, etc. for a total of 28 nutrients. For UPC foods and fast foods data is return as listed on their nutrition label
* Data Caching
  + Same as Nutritional Analysis API
* UPC or Barcode search
  + The Food Database API provides access to over 680,000 unique UPC codes.
* Low-cost solution
  + Same as Nutritional Analysis API

### Access

The Edamam B2B API is accessed by sending HTTPS requests on specific URLs as described below. The base URL is https://api.edamam.com, and you obtain the full URL by appending request’s path to the base URL, for example, <https://api.edamam.com/api/food-database/v2/parser>. The Food Database API allows the user to search for nutrition and diet information within the Food Database.

### Covered Use Cases

* Search for food by keyword, food name or UPC/Barcode
* Sourcing of nutrition facts for a given food, including: macro and micro nutrients, allergen labels, lifestyle and health labels
* Search for food by given nutrient quantity for 28 nutrients
* Search for foods within a given brand
* With the built-in food-logging context it allows for NLP requests for chatbots and natural language calorie counters

## Recipe Search API

### Specifications

* Over 2.3 million recipes in English
  + New sites and recipes are added continuously.
* 500+ top web recipe sources
  + The search algorithm returns the most relevant recipes from the most popular and best recipes sources on the web. It orders recipes by their cookability and quality, so the user can always count on getting the best recipes!
* Semantically organized database
  + The recipes in the database are normalized and can be filtered in the search by calorie and diet preferences.
* Full nutrition for each recipe
  + An accurate automated nutrition analysis web powered by the proprietary Natural Language Processing (NLP) engine. Customers get detailed nutrition breakdown of each recipe with 25+ nutrients and appropriateness for all major diets.
* Filter by calories, diet or allergy restrictions
  + Edamam has developed over 80 diet and health filters for the user to use. Applications can now be developed for virtually any popular diet or major health condition.
* Data Caching
  + Same as in Nutrition Analysis API.

### Access

The Edamam B2B API is accessed by sending HTTPS requests on specific URLs as described below. The base URL is https://api.edamam.com, and you obtain the full URL by appending request’s path to the base URL, for example, <https://api.edamam.com/api/recipes/v2>. The Recipe Search API allows for search through millions of web recipes and integrate this information into your mobile or web applications.

Edamam servers support standard HTTP compression using gzip. Using compression can reduce the size of the response and thus, increase the transfer speed. The client can indicate through the header, what compression methods it supports. The server, then will include another header to indicate the compressed response (or it will omit it, if the response is not compressed).

# Bibliography

[1] What is Edamam (<https://corehealth.global/marketplace/partner-pages/edamam>)

[2] Use Cases (<https://developer.edamam.com/calorie_counting>)

[3] Nutrition Analysis API (<https://developer.edamam.com/edamam-nutrition-api>)

[4] Food Database API (<https://developer.edamam.com/food-database-api>)