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SCHOOL OF  
MATHEMATICS AND STATISTICS

HONOURS PROJECT



TITLE: Data Analytics on Similarities and  
Differences of Global Cuisines

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DATE: May 4, 2020

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## Introduction

Among many things, one of humanity's necessities is food. Its importance expands beyond physiological necessity and extends to cultural associations as well. Historically, a cuisine was based on what natural resources could be found in the local area. This creates a unique flavour palate combination for each region around the world.

Family values is an emphasized element of many cultures. In order to strengthen and maintain interpersonal ties, being able to sit together at a table to share a meal is an important aspect. During this time, communication is made between family members such as to share updates or stories about their day. This family dynamic is not unique to my background, but also common among all collectivist cultures. Since food and drinks are typically at the center of each meal, I chose this topic as it will tie together two important aspects of my life that make me who I am today: cultural values and mathematics.

In this research, we will attempt to find a relationship between a cuisine and the ingredients in which it uses. We will examine ingredients of dishes that are typically related to a cuisine to determine how integrated food cultures around the world are and whether we can determine what a typical set of ingredients for a cuisine is.

We expect that a cuisine and typical set of ingredients in a dish have a one-to-one relationship. In other words, a cuisine can determine what a typical set of ingredients can look like in its dishes and a set of ingredients in a dish can determine which cuisine it belongs to. This speculation is from personal experience. For example, wine is a common ingredient used in wine-producing countries such as France and Italy in comparison to soybean being a common base ingredient in East Asian culture (Korean, Vietnam, Japan, etc) due to its abundance.

## Data Set

### Raw Data Set

The dataset comes in a JSON format file with 3 attributes: ID, Cuisine, and Ingredients. It is given as a training set and testing set. In the training set, there are ID numbers of 39,774 dishes, names of 20 cuisines and names of 6,714 ingredients. It is worth noting that in this study, we will consider ingredients that may represent the same ingredient in our everyday life, are separated as two different ingredients.

For example, “coarse Kosher salt” and “Kosher salt” are both Kosher salts, but this will count as two separate ingredients, since, for this example, there is fine Kosher salt available and the recipe does not specify. There is also missing data that we consider to be different ingredients. For example, “( oz.) tomato sauce” is supposed to have a numerical measure of tomato sauce required for the recipe, but did not come in the dataset. “( oz.) tomato sauce” is considered to be a different ingredient than “tomato sauce”. Since there are errors such as the examples listed, it is recommended to manually go through the ingredients list of results produced by this analysis, if used for further research. This report does not do so.

```
> dishes.per.cuisine
  cuisine freq
1    greek 1175
2 southern_us 4320
3   filipino  755
4    indian 3003
5   jamaican  526
6   spanish  989
7    italian 7838
8    mexican 6438
9    chinese 2673
10   british  804
11    thai 1539
12 vietnamese  825
13 cajun_creole 1546
14   brazilian  467
15    french 2646
16   japanese 1423
17    irish  667
18    korean  830
19 moroccan  821
20    russian  489
```

Figure 1. Number of dishes in each cuisine represented in dataset

From Figure 1, we can conclude that the representation of each cuisine available in the dataset can statistically represent its population environment. However, in a practical sense, we are limited to the dishes that are within this dataset, in comparison to innovative chefs creating new dishes daily around the world.

### Technology Used

The analysis will be done in R. It will be using packages “rjson”, “plyr”, “stats”, “nFactors”, “psych”, “factoextra”, and “RVenn”.

## Methodology

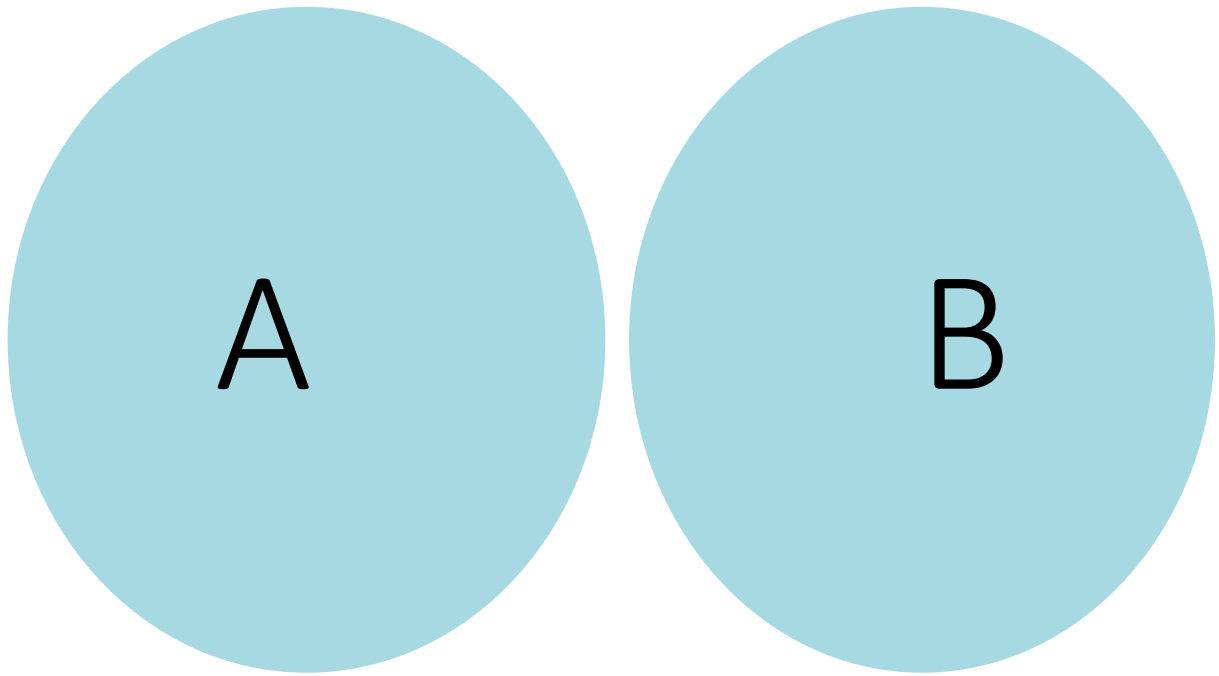
### Set Theory

In elementary statistics, we learn the notion of a set, which we will review briefly here.

A set is a collection of objects called elements. Each element either belongs to a set or it does not, and an element can be anything. It is not necessary for a set to have order of any type. If a set has no elements in it, it is called a null set or empty set. If a set contains all the elements that are possible values, it is called a universal set. Two sets are equal if they have exactly the same elements in them. From a set, we can define subsets, a collection of fewer objects, with each element that belongs to the subset must belong to the original set. Each subset is, by definition, a set itself.

We can perform operations on sets, such as intersections, unions and complements. The operation “intersection” can be performed on any amount of sets. An intersection of two sets is defined to be a subset of elements that belong to both original sets. If an intersection of two sets does not have any elements, then the two sets are defined to be independent or disjoint sets. The same definitions of an intersection apply to more than two sets. For example, in Figure 2, the intersection of sets A and B is a null set. In Figure 3, the intersection of sets A and B, sets B and C, and sets A and C are respectively the same shade with medium intensity and the intersection of sets A, B and C is the darkest shade in the middle of the figure. Note that regardless of the number of sets, the null set is always one element in the intersection set. If a set intersects itself, the resulting intersection set is the entire original set. If a set intersects a universal set, the resulting intersection set is the original set. If a set intersects a null set, the resulting intersection set is a null set.

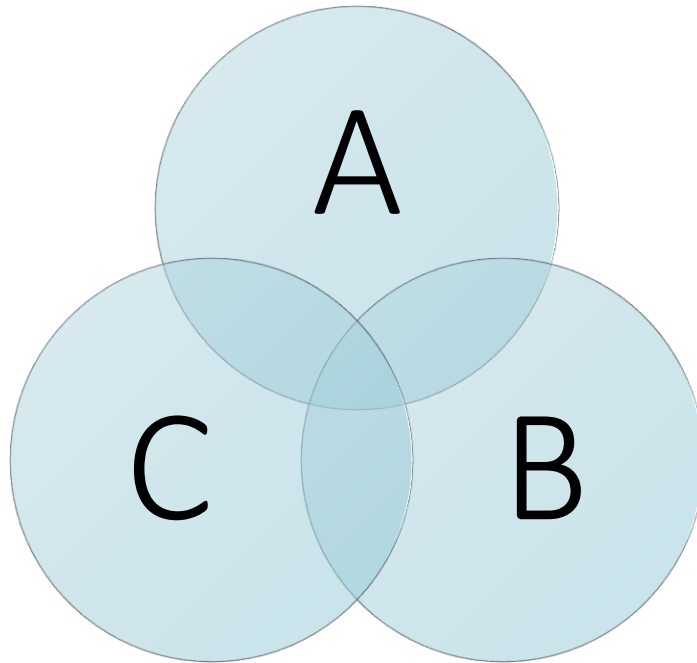




*Figure 2. Two subsets that have no intersection or their intersection is an empty set, are independent or disjoint sets*

The operation “union” can be performed on any amount of sets. A union of two sets is defined to be a combined set of all elements that belong to both original sets. Note that if the sets to be unionized has intersections that are not null, the elements within the intersections are counted once in total, not once for each set it belongs to. If a set is unionized with itself, the resulting union set is the original set. If a set is unionized with a universal set, the resulting union set is the universal set. If a set is unionized with a null set, the resulting union set is the original set. For example, in Figure 2, the union of disjoint sets are all elements in set A and in set B. In Figure 3, the union of sets A, B and C is the entire shaded region, regardless of colour intensity.

The operation “complement” or sometimes written as “difference” can be performed on any amount of sets. A complement of two sets, if the sets are taken as the universe set, is defined to be a subset of elements that belong to one of the two sets but not the other. This means that the complement set does not include any intersections, if they exist. If a set takes a complement of itself, the resulting set is a null set. If a set takes a complement of a universal set, the resulting set is all elements of the universal set except elements within the original set. If a set takes a complement of a null set, the resulting set is the original set. For example, in Figure 2, the complement of A is B, if sets A and B make up its universe set. In Figure 3, the complement of C, if sets A, B and C make up its universe set, is set A union set B without any of its intersections with C.



*Figure 3. Darker panels of colour are the varieties of intersections of three sets, A, B and C, with the darkest middle spot indicating an intersection of three sets. Lighter sections are the unique values of each set that is not in any other set. The entire coloured space is the union of three sets.*

## Principal Components Analysis (PCA)

Principal Components Analysis is a technique used for dimension reduction in data sets. Graphically, this technique rotates the coordinate axis to allow for its user to identify groupings among the data. Principal components are the underlying linear combinations of variables on a given data set.

In PCA, new variables are formed in a way such that the new variables are a linear combination of the original variables. PCA fits the data set such that the first linear combination explains the most substantial variance in the original variables. The second linear combination is orthogonal to the first and explains the second most substantial variance in the original variables. The third linear combination is orthogonal to the second and explains the third most substantial variance in the original variances. Each subsequent linear combination is orthogonal to the last and explains lesser variance than the last, until the cumulative proportion of variance explained sums up to 1, in which case means that all of the variance is explained by the set of linear combinations of variables known as principal components. This pattern allows its user to determine which components can approximate the original dataset with significantly reduced complexity, according to variance tolerance allowed for its user.

As explained earlier, PCA rotates the coordinate axis to create its principal components. Naturally, the next question is: how much do we rotate by and how do we calculate the rotation? In order to answer this question, recall that if we express a data set in terms of eigenvalues and eigenvectors, the information given in the data does not change. We are merely looking at the same information from a different angle, which makes it easier to continue with further computation in PCA.

PCA uses the following equation:

$$PCA_i = \sum_{j=1}^n \omega_{i,j} * V_j$$

where  $PCA_i$  represents the new variable  $i$ ,  $i = 1 \dots n$ , formed by a linear combination of original variables  $V_j$  and their respective weights  $\omega_j$  for  $j = 1 \dots n$ , and  $n$  is the number of original variables. Note that the maximum number of new variables is the number of original variables. This is because PCA is a transformation of a finite dataset. If transformations have been done to all data points in the dataset, there are no remaining data points left to be transformed.

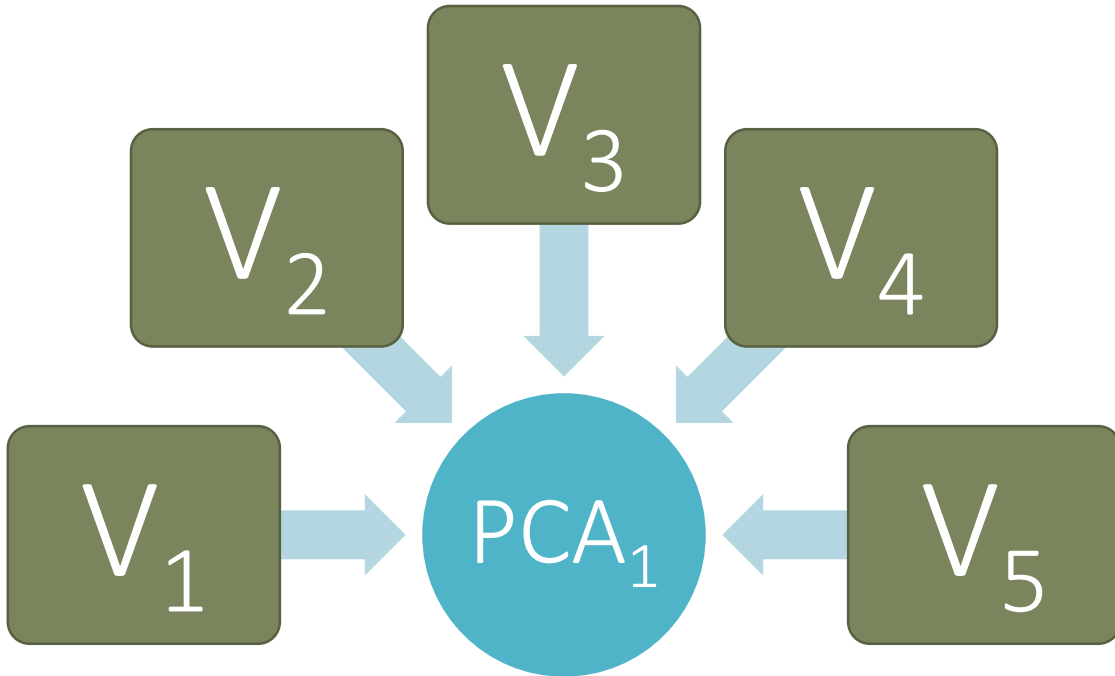


Figure 4. Diagram of how each PCA equation is formed. Each arrow will carry respective weights for its variable to form the equation of PCA.

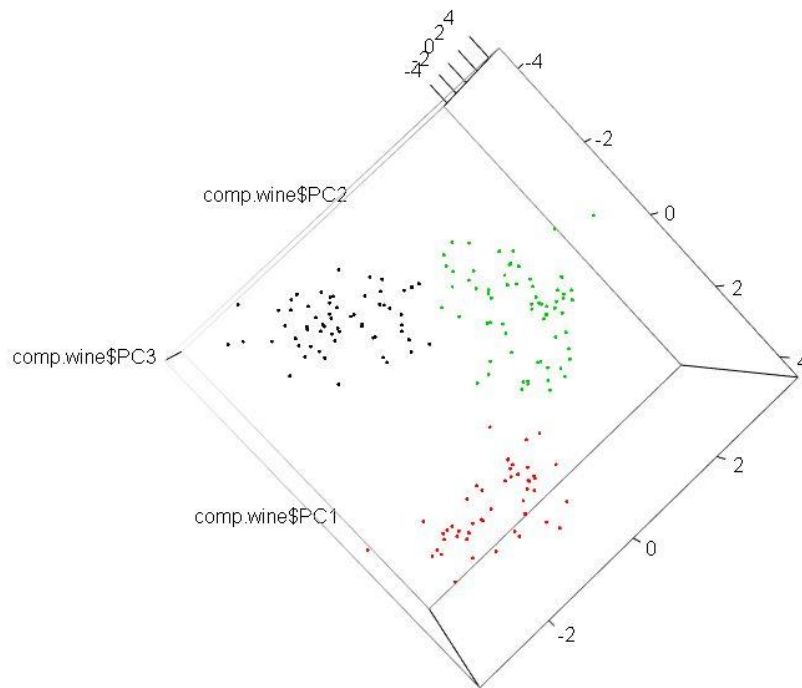


Figure 5. Example of 3D plot showing clear clustering at non-conventional axis

### Exploratory Factor Analysis (FA)

Exploratory Factor Analysis is a dimension reduction technique used to reduce to a fewer number of underlying factors. This technique is used to search for a pattern in responses due to a common unmeasured variable, known as a latent variable. These latent variables, also defined as a factor, are an attempt to explain a portion of the overall variance of the dataset and if there are any interrelationships among the latent variables.

Factor Analysis' model is to differentiate the variance of an observed variable into a communality portion and a unique portion. The communality variance is explained through shared factors, or latent variables as explained above. The unique variance is the portion of variance that is not due latent variable. In some cases, it can be called a "pure" variance. Unique variances occur only within the context that it is given in.

Factor Analysis uses the following model as its underlying equation to explain the covariance between observed variables:

$$\hat{\Sigma}_i = \hat{\Lambda} * \hat{\Lambda}^T + \hat{\psi}$$

where  $\hat{\Sigma}_i$  is the covariance matrix,  $\hat{\Lambda}$  is the communality loadings and  $\hat{\psi}$  is the unique portion of variance.

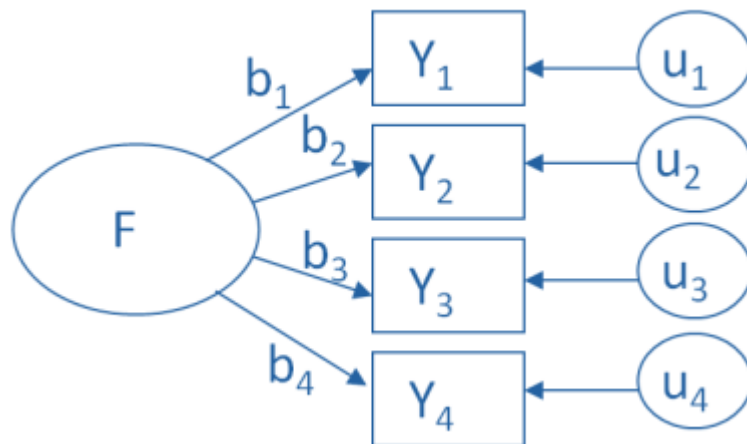


Figure 6. Factor Analysis basis diagram

For example, in Figure 6, the model used to describe the relationships here are:

$$\begin{cases} Y_1 = b_1 * F + u_1 \\ Y_2 = b_2 * F + u_2 \\ Y_3 = b_3 * F + u_3 \\ Y_4 = b_4 * F + u_4 \end{cases}$$

where  $Y_i$  represents the observed value,  $F$  represents the latent factor (unobserved variable) that explains a commonality,  $b_i$  represents the loadings or weights corresponding to the proportion of variance from the observed variable that is explained by a commonality, and  $u_i$  represents the (remaining) proportion of variance that is unique to the observed variable (or in other words, unexplained by commonality).

Similar to PCA, Factor Analysis also rotates its coordinate axis. In this analysis, we will use a varimax rotation, also called a Kaiser-Varimax rotation. It is calculated using the maximum sum of the variance of the squared loadings. This rotation emphasizes on the important variables which is a small number but each factor has high loadings or weights. Note that this rotation does not necessarily have orthogonality but it improves interpretability in replacement.

## Analysis

Prior to applying any methods explained in the Methodology section, we must first transform the raw dataset into something that is interpretable and quantitative since the raw dataset does not contain any measurements.

In order to do so, the original JSON file (*food.import*) is transformed into a data frame instance (*food.dat*) and subsets of each cuisine containing its respective ingredients (*cuisine\_name.cuisine* where *cuisine\_name* corresponds to the cuisine name respectively). Furthermore, each cuisine is tallied up and remerged to create a consolidated matrix of all ingredients available in the dataset with its frequency count relative to each cuisine. This way, we can extrapolate how important a certain ingredient is to its respective cuisine. After standardization, the analysis will continue using the standardized version of the consolidated frequency matrix (*std.cumul.matrix*).

## Principal Component Analysis

In this research, we will use PCA to determine the optimal number of latent factors necessary for Factor Analysis. That is, we will reduce the data set to principal components which, in this dataset, is a linear combination of cuisines. The principle components should explain most of the variance that occurs in the dataset. In this analysis, the PCA results are stored in variable *food.pc*.

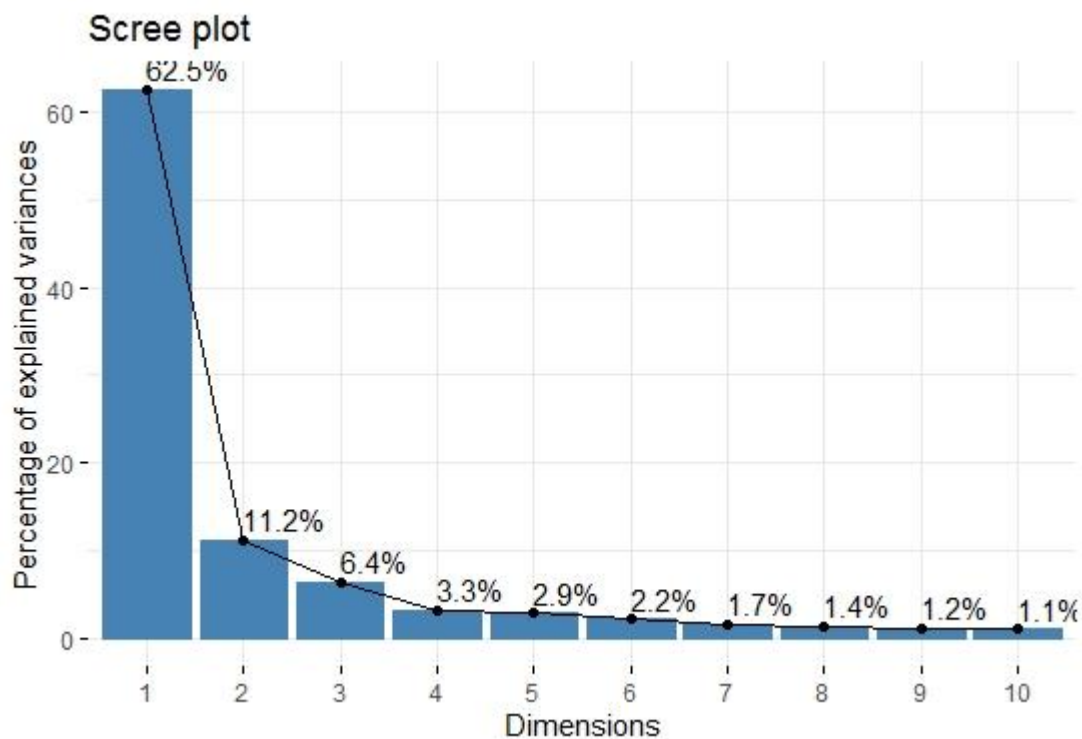


Figure 7. PCA Scree Plot

From Figure 7, the scree plot of PCA recommends us to reduce our dataset to 3 principle components. This is because no significant amount of variance is explained from dimension 4 onwards.



```
> summary(food.pc)
Importance of components:
      PC1      PC2      PC3      PC4      PC5      PC6      PC7      PC8      PC9
Standard deviation  3.5352 1.4956 1.1340 0.81811 0.76464 0.66709 0.57577 0.52819 0.48633
Proportion of Variance 0.6249 0.1118 0.0643 0.03347 0.02923 0.02225 0.01658 0.01395 0.01183
Cumulative Proportion 0.6249 0.7367 0.8010 0.83446 0.86370 0.88595 0.90252 0.91647 0.92830
      PC10      PC11      PC12      PC13      PC14      PC15      PC16      PC17
Standard deviation  0.46833 0.44122 0.42316 0.39615 0.37701 0.36441 0.31502 0.3065
Proportion of Variance 0.01097 0.00973 0.00895 0.00785 0.00711 0.00664 0.00496 0.0047
Cumulative Proportion 0.93926 0.94900 0.95795 0.96580 0.97290 0.97954 0.98451 0.9892
      PC18      PC19      PC20
Standard deviation  0.28854 0.26701 0.24783
Proportion of Variance 0.00416 0.00356 0.00307
Cumulative Proportion 0.99336 0.99693 1.00000
```

Figure 8. PCA Summary of variance explained with each new dimension, also known as each new linear combination

From Figure 8, the numeric summary of variance explained with each addition of a new linear combination. This confirms the same recommendation as in Figure 7 of reducing to 3 components, since there is no significant additional information for dimension 4 onwards.

```
> food.pc$rotation[,1:3]
      PC1      PC2      PC3
greek    0.2185599 -0.179346305  0.27257754
southern_us 0.2381445 -0.173240697 -0.32946809
filipino  0.2412625  0.171486731 -0.01235565
indian    0.2183493  0.006519565  0.18066725
jamaican  0.2453034  0.034145863  0.02815776
spanish   0.2403153 -0.156096699  0.26295872
italian   0.2351222 -0.187629872  0.17300348
mexican   0.2148666 -0.047633750  0.28258982
chinese   0.1912652  0.402723956 -0.11057333
british   0.2279046 -0.197575401 -0.39509011
thai      0.1871647  0.359740488  0.13126612
vietnamese 0.1990228  0.350793151  0.03817541
cajun_creole 0.2293397 -0.112769272  0.06756207
brazilian 0.2474995 -0.056682297  0.15037387
french    0.2448967 -0.190300842 -0.15263774
japanese  0.1970212  0.338057531 -0.17730662
irish     0.2327731 -0.187020607 -0.35705333
korean    0.1894436  0.395426993 -0.08013726
moroccan 0.2136120 -0.120017073  0.35257720
russian   0.2423822 -0.139657482 -0.27836699
```

Figure 9. PCA linear combinations of original variables, cuisine names

Figure 9 shows us the linear combination of cuisines to form the principle components of interest so that further analysis on its ingredients can be done.

However, this analysis is to find whether there is a one-to-one relationship between a cuisine and its ingredients. We are not searching for a model to fit all cuisines into a linear model, rather we are seeking whether there is an explanation for cuisines to congregate in terms of their ingredients that are typically used. Thus, it is inappropriate to use Principle Component Analysis to be completing this research.

## Factor Analysis

This method is more appropriate to model our research question to detect any underlying latent factors common among global cuisines, in respect to its ingredients. Firstly, we must determine if there are any latent factors, and if so, how many.

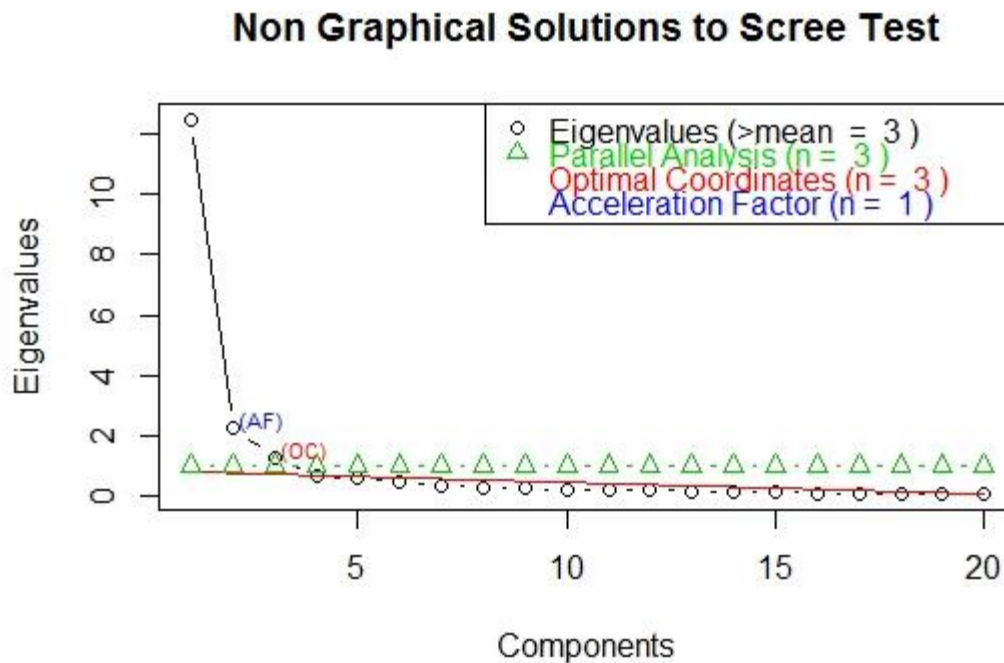
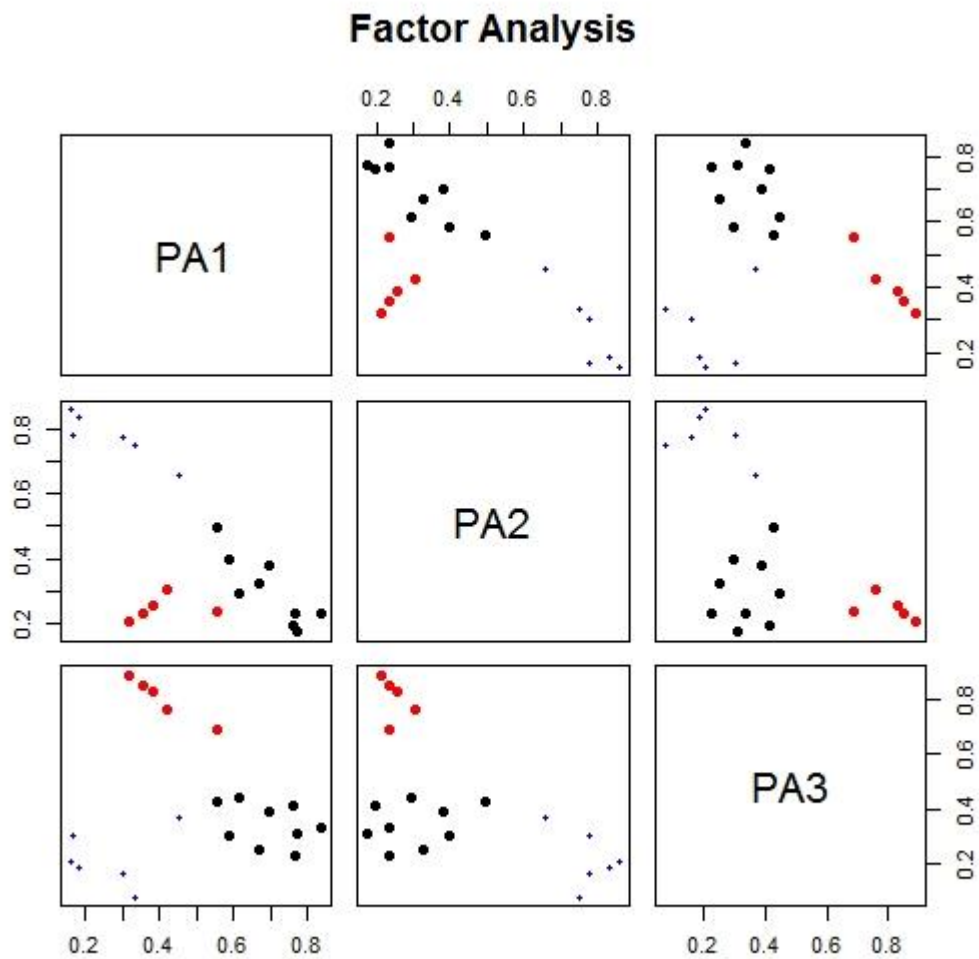


Figure 10. FA Scree Plot

From Figure 10, the scree plot of FA recommends there are 3 latent factors that were not measured.

Using results from Figure 10, we can proceed with Factor Analysis. In this research, the procedure has additional limits to ensure the results are orthogonal to each other and utilizes a varimax rotation. A varimax rotation maximizes the sum of the variance of the squared-correlations. Note that the correlations are between the observed variables and latent factors.



*Figure 11. FA clustering plot with respect to 3 latent factors*

From Figure 11, we can distinctively recognize the data points are clustered accordingly into 3 clusters and it is unnecessary for a fourth dimension or cluster.

## Factor Path Diagram

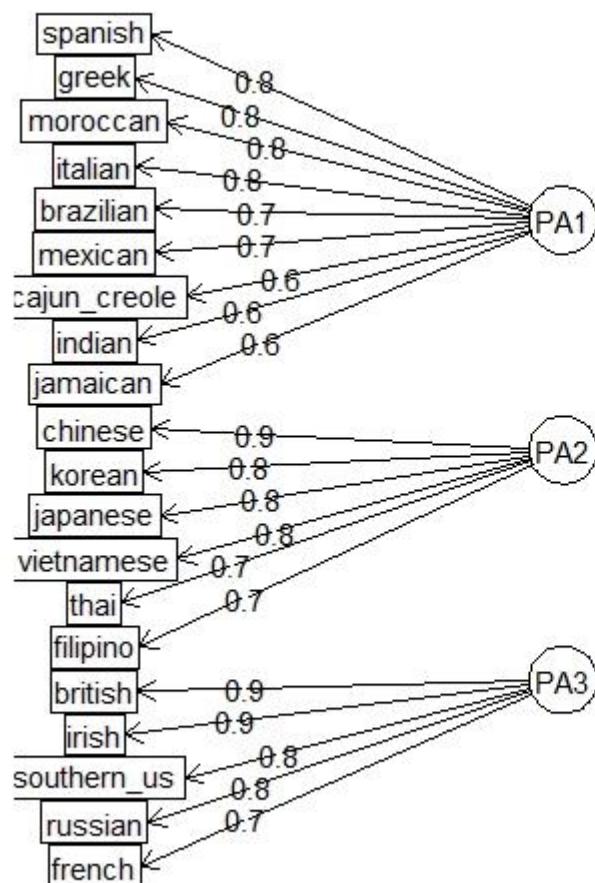


Figure 12. Diagram of FA results

From Figure 12, we can say indeed there are 3 latent factors that cause ingredients to be shared among similar cuisines. Specifically, we can say that Spanish, Greek, Moroccan, Italian, Brazilian, Mexican, Cajun Creole, Indian and Jamaican cuisines share a common set of ingredients. Chinese, Korean, Japanese, Vietnamese, Thai and Filipino cuisines share a separate common set of ingredients. Finally, British, Irish, Southern United States, Russian and French cuisines share another set of ingredients.

```
> fa.varimax$loadings
```

Loadings:

	PA1	PA2	PA3
greek	0.772	0.176	0.313
southern_us	0.385	0.258	0.829
filipino	0.455	0.659	0.367
indian	0.586	0.399	0.299
jamaican	0.557	0.497	0.426
spanish	0.840	0.234	0.334
italian	0.763	0.198	0.415
mexican	0.671	0.325	0.252
chinese	0.157	0.859	0.209
british	0.317	0.211	0.891
thai	0.331	0.749	
vietnamese	0.303	0.776	0.159
cajun_creole	0.615	0.293	0.443
brazilian	0.698	0.383	0.391
french	0.554	0.236	0.689
japanese	0.167	0.777	0.304
irish	0.357	0.233	0.852
korean	0.184	0.833	0.187
moroccan	0.769	0.233	0.228
russian	0.422	0.306	0.761

	PA1	PA2	PA3
SS loadings	5.80	4.870	4.716
Proportion Var	0.29	0.244	0.236
Cumulative Var	0.29	0.534	0.769

Figure 13. FA loadings

Figure 13 gives the weights that are required to form linear equations of each latent factor. The figure also includes a summary of the proportion of variance that is explained by each additional factor. This tells us that each latent factor explains relatively equal portion of the variance and in total explains 76.9% of the dataset's variance.

From Appendix B, the correlation matrix from FA, we can conclude that there is correlation among a cuisine and other cuisines listed in this research. This means that there are common ingredients among a cuisine and the remaining cuisines. From Appendix C, the residual matrix from FA, we can conclude that our model is a good representation of the underlying concept since the residuals, or error term, is close to 0, except on the diagonal.



## Set Theory

Using results from Factor Analysis, we know which types of cuisine are clustered together. A question remains to determine which ingredients the common ingredients among each cluster and which ingredients are unique to each cuisine. As described in ‘Dataset’ Section, the results will require further logical reduction that is not done in this analysis, if it is used for continuous research.

We will be using intersections and complements in order to segregate ingredients. Knowing which types of cuisine are clustered together, an intersection among each cluster to determine the common ingredients. Then the set of interest (unique ingredients to a cuisine, dependent on the dataset) is calculated by taking the complement of the intersection set for each cluster. This method assumes that each cluster is a universe set and the null set is present but omitted.

In other words, for each cluster, the following operations are utilized

$$\begin{aligned} \text{Common Ingredients}_{i,j} &= \text{Cuisine}_i \cap \text{Cuisine}_j \text{ for } i \neq j \\ \text{Unique Ingredients}_i &= (\text{Common Ingredients}_{i,j})^c \end{aligned}$$

For full list of Common Ingredients and Unique Ingredients, refer to Appendix D.

We observe in Cluster 1 (Spanish, Greek, Moroccan, Italian, Brazilian, Mexican, Cajun Creole, Indian and Jamaican cuisines) have 227 common ingredients, in Cluster 2 (Chinese, Korean, Japanese, Vietnamese, Thai and Filipino cuisines) have 312 common ingredients and in Cluster 3 (British, Irish, Southern United States, Russian and French cuisines) have 346 common ingredients. The following table summarizes the number of unique ingredients in its relative cuisine.

Cluster Number	Number of Common Ingredients
1	227
2	312
3	346

<b>Cuisine</b>	<b>Number of Unique Ingredients</b>	<b>Total Number of Ingredients in Data Set</b>
Spanish	54	1,263
Greek	65	1,198
Moroccan	34	974
Italian	408	2,929
Brazilian	50	853
Mexican	456	2,684
Cajun Creole	105	1,576
Indian	143	1,664
Jamaican	36	887
Chinese	197	1,792
Korean	41	898
Japanese	139	1,439
Vietnamese	46	1,108
Thai	74	1,376
Filipino	51	947
British	76	1,166
Irish	36	999
Southern United States	272	2,462
Russian	49	872
French	193	2,102

## Conclusions

In summary, cuisines and their respective ingredients are not uniquely defined and do not have a one-to-one relationship. Most of the variance for each cuisine is explained by a latent variable and any correlations with other cuisines that is not grouped into the same category from Factor Analysis.

Reasons for this result could be due to modern transportation creating ease for local ingredients to be utilized in other parts of the world. Indeed, trading of goods has been in human history since as long as anyone can remember. For this reason, it is possible that one of the latent variables from Factor Analysis is due to geographical proximity.

Another possibility to explain the latent variable is that the countries in a cluster historically have strong trade ties. Thus, ingredients unique to other countries also saturate the markets in which a country has strong ties to.

A third possibility is historical colonialism. For example, many of the countries of current Africa were colonized by France. Specifically, North African countries also have a geographical proximity advantage to import any ingredients that are unable to be grown or found locally.

One thing for sure is that food is an important topic, no matter what your background is. People enjoy sharing meals with others, as humans are social beings. And in my culture, we call it destiny, to have the ability to share a meal together.



## References

### Data Set

<https://www.kaggle.com/c/whats-cooking/data>

### Technical Readings

#### Explanatory Factor Analysis

<https://www.theanalysisfactor.com/the-fundamental-difference-between-principal-component-analysis-and-factor-analysis/>  
<https://www.theanalysisfactor.com/factor-analysis-1-introduction/>  
<https://www.theanalysisfactor.com/factor-analysis-common-problems/>  
<https://www.theanalysisfactor.com/what-is-a-latent-variable/>  
<https://www.statmethods.net/advstats/factor.html>  
<https://www.geo.fu-berlin.de/en/v/soga/Geodata-analysis/factor-analysis/A-simple-example-of-FA/index.html>  
[https://ncss-wpengine.netdna-ssl.com/wp-content/themes/ncss/pdf/Procedures/NCSS/Factor\\_Analysis.pdf](https://ncss-wpengine.netdna-ssl.com/wp-content/themes/ncss/pdf/Procedures/NCSS/Factor_Analysis.pdf)  
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#### Principal Component Analysis

Dr. Shirley E. Mills 2018, STAT4601 Notes, Section 4

<https://www.datacamp.com/community/tutorials/pca-analysis-r>

#### Set Theory

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#### Miscellaneous

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<http://www.sthda.com/english/articles/31-principal-component-methods-in-r-practical-guide/116-mfa-multiple-factor-analysis-in-r-essentials/>  
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<https://www.statisticssolutions.com/factor-analysis-sem-factor-analysis/>

## Bibliography

Collectivist Culture

<https://www.verywellmind.com/what-are-collectivistic-cultures-2794962>

Importance of Food to Culture

<https://family.jrank.org/pages/639/Food-Food-Culture.html>

## Appendices

### Appendix A

#### Main File

#Stephanie Siu

#100863829

#-----#

# Setting up the directory and database #

#-----#

```
#install.packages(c("rjson","plyr","factoextra","stats","nFactors","psych","RVenn"))
```

```
Student.Number <- "100863829"
```

```
ASorLab <- "Honours"
```

```
Assignment.Number <- "Project"
```

```
Student.info <- paste(Student.Number,ASorLab,Assignment.Number, sep="-")
```

```
drive = "C:"
```

```
path.upto <- omitted for privacy
```

```
code.dir <- paste(drive, path.upto, Student.info, "Code", sep="/")
```

```
data.dir <- paste(drive, path.upto, Student.info, "Data", sep="/")
```

```
work.dir <- paste(drive, path.upto, Student.info, "Work", sep="/")
```

```
setwd(code.dir)
```

```
getwd()
```

```
# Calling necessary functions
```

```
source(paste(code.dir,"Honours Project - Functions.R", sep="/"))
```

```
# Importing data
```

```
setwd(data.dir)
```

```
#install.packages("rjson")
```

```
library("rjson")
```

```
food.import <- fromJSON(file = "train.json")
```

```
food.dat <- do.call(rbind, lapply(food.import, data.frame))
```

```
setwd(code.dir)
```

#-----#

#-----#

# Setting up Data #

#-----#

```
#Unique ID-Cuisine (ie.39,774 dishes in set, 20 different cuisines, 6714 unique ingredients)
```

```
# ** kosher salt and coarse kosher salt are examples of 2 ingredients that
```

```
# may represent the same ingredient in reality but in this study it counts as 2
```

```
library(plyr)
```

```

id.cuisine <- unique(cbind(food.dat[1],food.dat[2]))
dishes.per.cuisine <- count(id.cuisine, vars = "cuisine")

typesOfCuisine <- unique(food.dat[2]) #20 different cuisines in set
cuisine.ingredients <- cbind(food.dat[2],food.dat[3])

#-----#
#Sort by cuisine type
df.names <- c()
for(i in 1:nrow(typesOfCuisine)){
  #Initiate new data frame for each type of cuisine
  newDF <- c()

  #Extract ingredients from each dish, with i cuisine from dataset
  for(j in 1:nrow(food.dat)){
    if(typesOfCuisine[i,] == food.dat[j,2]){
      newDF <- rbind(newDF, as.character(food.dat[j,3]))
    }
  }

  #Create variable to store populated data frame
  dimnames(newDF) <- list(1:nrow(newDF), "Ingredients")
  assign(paste(trimws(typesOfCuisine[i,], which = "both"), ".cuisine", sep = ""), newDF)

  #Frequency Count of each cuisine (stored in data frame)
  assign(paste(trimws(typesOfCuisine[i,], which = "both"), ".cuisine.df", sep =
""), count(get(paste(trimws(typesOfCuisine[i,], which = "both"), ".cuisine", sep = ""))))
  df.names <- rbind(df.names, paste(trimws(typesOfCuisine[i,], which = "both"), ".cuisine.df", sep = ""))

  rm(newDF)
}
rm(i,j)

#Consolidate all frequency tables
cumul.matrix <- c()
cumul.matrix <- Reduce(function(...) merge(...,by = "Ingredients", all = TRUE),
  list(greek.cuisine.df,southern_us.cuisine.df,filipino.cuisine.df,
    indian.cuisine.df,jamaican.cuisine.df,spanish.cuisine.df,
    italian.cuisine.df,mexican.cuisine.df,chinese.cuisine.df,
    british.cuisine.df,thai.cuisine.df,vietnamese.cuisine.df,
    cajun_creole.cuisine.df,brazilian.cuisine.df,french.cuisine.df,
    japanese.cuisine.df,irish.cuisine.df,korean.cuisine.df,
    moroccan.cuisine.df,russian.cuisine.df))
cumul.matrix[is.na(cumul.matrix)] <- 0
dimnames(cumul.matrix) <- list(1:nrow(cumul.matrix), c("Ingredients",t(typesOfCuisine)))

#Standardize frequencies (ie. variance = 1, mean = 0)
std.cumul.matrix <- f.data.std(cumul.matrix[,2:ncol(cumul.matrix)])

```

```

#-----#

#-----#
#   Analyzing Data   #
# Explore 1-1 relationship #
#-----#

library("factoextra")
library(stats)
library("nFactors")
library("psych")

#Using PCA to determine the amount of factors required for Factor Analysis
food.pc <- prcomp(std.cumul.matrix)
fviz_screplot(food.pc, addlabels = TRUE)
summary(food.pc)

#Determine that amount of factors
ev.cumul <- eigen(cor(std.cumul.matrix)) #get Eigenvalues
ap.cumul <- parallel(subject = nrow(std.cumul.matrix), var = ncol(std.cumul.matrix), rep=100, cent = 0.05)
nS.cumul <- nScree(x = ev.cumul$values, aparallel = ap.cumul$qevpea)
plotnScree(nS.cumul)

#Perform Factor Analysis and draw results
fa.varimax <- fa(std.cumul.matrix, nfactors = 3, rotate="varimax", fm="pa")
fa.diagram(fa.varimax, main="Factor Path Diagram")
fa.plot(fa.varimax)

write.csv(fa.varimax$r, file = 'Cuisines-Correlation-Matrix.csv')
write.csv(fa.varimax$residual, file = 'Cuisines-Residual-Matrix.csv')
write.csv(fa.varimax$model, file = 'Cuisines-Model-Matrix.csv')

#-----#

#-----#
#       Analyzing Data       #
# Finding unique set of ingredients for a cuisine #
#-----#

library("RVenn")

#Create Venn object of sets
food.ingred <- vector(mode = "list", length = 0)
for(i in 1:nrow(df.names)){
  templList <- c()

  for(j in 1:nrow(get(df.names[i]))){

```

```

    tempList <- rbind(tempList, as.character(get(df.names[i])[j,1]))
  }
  rm(j)

  food.ingred[[trimws(typesOfCuisine[i,], which = "both")]] <- as.character(tempList)
  rm(tempList)
}
rm(i)

food.venn <- Venn(food.ingred)

#Intersection of all sets
#separated by results of Factor Analysis
pa1.group <-
c("spanish","greek","moroccan","italian","brazilian","mexican","cajun_creole","indian","jamaican")
pa2.group <- c("chinese","korean","japanese","vietnamese","thai","filipino")
pa3.group <- c("british","irish","southern_us","russian","french")

food.overlap <- overlap(food.venn)
pa1.overlap <- overlap(food.venn,pa1.group)
pa2.overlap <- overlap(food.venn,pa2.group)
pa3.overlap <- overlap(food.venn,pa3.group)

overlap.pairs <- overlap_pairs(food.venn)
for(i in 1:nrow(typesOfCuisine)){
  cuis.pairs <- overlap.pairs[grepl(typesOfCuisine[i,], names(overlap.pairs))]
  anti <- Reduce(union,cuis.pairs)

  assign(paste(trimws(typesOfCuisine[i,], which = "both"),".unique.ingred",sep =
""),setdiff(food.ingred[[typesOfCuisine[i,]], anti))
  write.csv(get(paste(trimws(typesOfCuisine[i,], which = "both"),".unique.ingred",sep = "")), file =
paste(trimws(typesOfCuisine[i,], which = "both"),"unique.csv",sep = "-"))
}
rm(i)

#Export data
write.csv(pa1.overlap, file = 'Cuisines-Cluster-1-Common.csv')
write.csv(pa2.overlap, file = 'Cuisines-Cluster-2-Common.csv')
write.csv(pa3.overlap, file = 'Cuisines-Cluster-3-Common.csv')

for(i in 1:length(ls(overlap.pairs))){
  write.csv(overlap.pairs[[i]], file = paste(ls(overlap.pairs)[[i]],".csv",sep = ""))
}
rm(i)

#-----#

#-----#

```

```
# Clean Up #
#-----#

install.packages("mise")
library(mise)
mise()
remove.packages("mise")
```

## Function File

```
#=====
#This file is to indicate functions that may be previously defined
#and required for the completion of Honours Project
#=====

#=====
# Standardize data
#=====
f.data.std <- function(data) {
  data <- as.matrix(data)
  bar <- apply(data, 2, mean)
  s <- apply(data, 2, sd)
  t((t(data) - bar)/s)
}
```

## Appendix B

	greek	southern_us	filipino	indian	jamaican	spanish	
italian							
greek	1.0000000	0.5971562	0.5639664	0.5625928	0.6203133	0.8304547	0.
8373867							
southern_us	0.5971562	1.0000000	0.6249226	0.5696430	0.7042624	0.6478074	0.
6842633							
filipino	0.5639664	0.6249226	1.0000000	0.6850491	0.7931372	0.6405063	0.
6210650							
indian	0.5625928	0.5696430	0.6850491	1.0000000	0.6974376	0.6353729	0.
5714558							
jamaican	0.6203133	0.7042624	0.7931372	0.6974376	1.0000000	0.6872593	0.
6593917							
spanish	0.8304547	0.6478074	0.6405063	0.6353729	0.6872593	1.0000000	0.
8736847							
italian	0.8373867	0.6842633	0.6210650	0.5714558	0.6593917	0.8736847	1.
0000000							
mexican	0.6198646	0.5703759	0.6079061	0.6651390	0.6701513	0.6908276	0.
6353015							
chinese	0.3676106	0.4581235	0.7082980	0.4674456	0.5872475	0.4310484	0.
4106898							
british	0.5536533	0.9191724	0.6020401	0.5513025	0.6591220	0.6082710	0.
6438799							
thai	0.3829965	0.4024673	0.6495315	0.5171129	0.5856319	0.4594079	0.
4185711							
vietnamese	0.4163961	0.4637404	0.6940710	0.5146285	0.5902735	0.4816973	0.
4487207							
cajun_creole	0.6508640	0.7106618	0.6621778	0.6007891	0.7281048	0.7316194	0.
7123803							
brazilian	0.6877905	0.6901220	0.7477659	0.6961626	0.7733162	0.8011381	0.
7515036							
french	0.7121941	0.8494052	0.6261226	0.5762822	0.6805581	0.7902121	0.
8223299							
japanese	0.3847125	0.5111118	0.6888987	0.5202229	0.5881166	0.4465707	0.
4201130							
irish	0.5761398	0.9105845	0.6404067	0.5718490	0.6883299	0.6257171	0.
6647842							
korean	0.3832358	0.4206500	0.7037981	0.4475843	0.5912468	0.4382125	0.
4173180							
moroccan	0.7202908	0.5318768	0.5580905	0.7057347	0.6427674	0.7844894	0.
7049573							
russian	0.6130474	0.8580536	0.6893115	0.6141376	0.6977730	0.6796991	0.
6749762							
	mexican	chinese	british	thai	vietnamese	cajun_creole	
brazilian							
greek	0.6198646	0.3676106	0.5536533	0.3829965	0.4163961	0.6508640	
0.6877905							
southern_us	0.5703759	0.4581235	0.9191724	0.4024673	0.4637404	0.7106618	
0.6901220							
filipino	0.6079061	0.7082980	0.6020401	0.6495315	0.6940710	0.6621778	
0.7477659							
indian	0.6651390	0.4674456	0.5513025	0.5171129	0.5146285	0.6007891	
0.6961626							
jamaican	0.6701513	0.5872475	0.6591220	0.5856319	0.5902735	0.7281048	
0.7733162							



spanish	0.6908276	0.4310484	0.6082710	0.4594079	0.4816973	0.7316194
0.8011381						
italian	0.6353015	0.4106898	0.6438799	0.4185711	0.4487207	0.7123803
0.7515036						
mexican	1.0000000	0.4121721	0.5038180	0.5093630	0.4936607	0.6508817
0.7395221						
chinese	0.4121721	1.0000000	0.4114622	0.6646506	0.6984558	0.4528101
0.4858172						
british	0.5038180	0.4114622	1.0000000	0.3452057	0.4141907	0.6306078
0.6604844						
thai	0.5093630	0.6646506	0.3452057	1.0000000	0.8900299	0.4374883
0.5842785						
vietnamese	0.4936607	0.6984558	0.4141907	0.8900299	1.0000000	0.4501747
0.5714116						
cajun_creole	0.6508817	0.4528101	0.6306078	0.4374883	0.4501747	1.0000000
0.7272461						
brazilian	0.7395221	0.4858172	0.6604844	0.5842785	0.5714116	0.7272461
1.0000000						
french	0.5652093	0.4477453	0.8494178	0.4219971	0.4997421	0.6973342
0.7260423						
japanese	0.4199933	0.8101321	0.4825912	0.5945563	0.6548451	0.4424004
0.5080322						
irish	0.5327384	0.4174382	0.9223696	0.3611390	0.4327233	0.6637044
0.6684476						
korean	0.4187304	0.8561619	0.3872128	0.6283645	0.6816294	0.4528225
0.4933677						
moroccan	0.6528671	0.3736800	0.5061528	0.4210515	0.4361116	0.6104980
0.6841025						
russian	0.5936589	0.4709541	0.8834740	0.4100441	0.4999179	0.6690190
0.7189628						
	french	japanese	irish	korean	moroccan	russian
greek	0.7121941	0.3847125	0.5761398	0.3832358	0.7202908	0.6130474
southern_us	0.8494052	0.5111118	0.9105845	0.4206500	0.5318768	0.8580536
filipino	0.6261226	0.6888987	0.6404067	0.7037981	0.5580905	0.6893115
indian	0.5762822	0.5202229	0.5718490	0.4475843	0.7057347	0.6141376
jamaican	0.6805581	0.5881166	0.6883299	0.5912468	0.6427674	0.6977730
spanish	0.7902121	0.4465707	0.6257171	0.4382125	0.7844894	0.6796991
italian	0.8223299	0.4201130	0.6647842	0.4173180	0.7049573	0.6749762
mexican	0.5652093	0.4199933	0.5327384	0.4187304	0.6528671	0.5936589
chinese	0.4477453	0.8101321	0.4174382	0.8561619	0.3736800	0.4709541
british	0.8494178	0.4825912	0.9223696	0.3872128	0.5061528	0.8834740
thai	0.4219971	0.5945563	0.3611390	0.6283645	0.4210515	0.4100441
vietnamese	0.4997421	0.6548451	0.4327233	0.6816294	0.4361116	0.4999179
cajun_creole	0.6973342	0.4424004	0.6637044	0.4528225	0.6104980	0.6690190
brazilian	0.7260423	0.5080322	0.6684476	0.4933677	0.6841025	0.7189628
french	1.0000000	0.4971933	0.8288367	0.4310242	0.6346518	0.8407490
japanese	0.4971933	1.0000000	0.4868833	0.8015645	0.3974121	0.5504915
irish	0.8288367	0.4868833	1.0000000	0.4158832	0.5296921	0.8740917
korean	0.4310242	0.8015645	0.4158832	1.0000000	0.3901603	0.4675613
moroccan	0.6346518	0.3974121	0.5296921	0.3901603	1.0000000	0.5702125
russian	0.8407490	0.5504915	0.8740917	0.4675613	0.5702125	1.0000000



Cuisines-Correlation-Matrix.csv

## Appendix C

	greek	southern_us	filipino	indian	jamaican
spanish					
greek	0.274787315	-0.004749451	-0.018522052	-0.053545608	-0.030226370
0.0361454452					
southern_us	-0.004749451	0.097652960	-0.024822828	-0.006694417	0.008972961
-0.0125838223					
filipino	-0.018522052	-0.024822828	0.223089104	0.045509991	0.055768518
-0.0186873582					
indian	-0.053545608	-0.006694417	0.045509991	0.408292035	0.045808051
-0.0498181901					
jamaican	-0.030226370	0.008972961	0.055768518	0.045808051	0.262032111
-0.0387019510					
spanish	0.036145445	-0.012583822	-0.018687358	-0.049818190	-0.038701951
0.1282187444					
italian	0.083495333	-0.004528925	-0.009475486	-0.078718055	-0.040561765
0.0478749083					
mexican	-0.034156953	0.019194365	-0.004642148	0.067064737	0.027717704
-0.0327589638					
chinese	0.029733200	0.003003329	-0.006136473	-0.029609046	-0.015767408
0.0284883339					
british	-0.007274252	0.003602100	-0.008856657	0.014630677	-0.001680529
-0.0051768775					
thai	-0.027741810	0.020635608	-0.022077068	0.002336669	-0.002232585
-0.0185988301					
vietnamese	-0.004185829	0.014978281	-0.014177194	-0.020180132	-0.031890145
-0.0076426282					
cajun_creole	-0.014343851	0.030773677	0.026102729	-0.009008762	0.051368047
-0.0015576944					
brazilian	-0.040896246	-0.001301996	0.034005865	0.017654648	0.028119300
-0.0052184846					
french	0.027445449	0.003870460	-0.034784010	-0.048454300	-0.038394158
0.0397442430					
japanese	0.024121835	-0.005868054	-0.011210052	0.021603560	-0.020311035
0.0233530820					
irish	-0.007123699	0.006874049	0.011703221	0.015016633	0.011431610
-0.0131802295					
korean	0.036238130	-0.019768825	0.002105129	-0.048297794	-0.004543100
0.0266639896					
moroccan	0.014472185	-0.012836308	-0.029112681	0.094437592	0.002117208
0.0083239478					
russian	-0.004573386	-0.014486127	0.016171195	0.017406982	-0.012930308
-0.0002389174					
italian		mexican	chinese	british	thai
vietnamese					
greek	0.083495333	-0.034156953	0.029733200	-0.007274252	-0.027741810
-0.0041858289					
southern_us	-0.004528925	0.019194365	0.003003329	0.003602100	0.020635608
0.0149782806					
filipino	-0.009475486	-0.004642148	-0.006136473	-0.008856657	-0.022077068
-0.0141771937					
indian	-0.078718055	0.067064737	-0.029609046	0.014630677	0.002336669
-0.0201801323					
jamaican	-0.040561765	0.027717704	-0.015767408	-0.001680529	-0.002232585
-0.0318901453					
spanish	0.047874908	-0.032758964	0.028488334	-0.005176878	-0.018598830
-0.0076426282					

italian	0.206411260	-0.045534870	0.033676871	-0.009820210	-0.013431577
-0.0026987811					
mexican	-0.045534870	0.380804430	-0.025445586	-0.002523022	0.024889041
-0.0024694297					
chinese	0.033676871	-0.025445586	0.194488291	-0.005804229	-0.045629096
-0.0487966636					
british	-0.009820210	-0.002523022	-0.005804229	0.060660381	0.016150603
0.0123438846					
thai	-0.013431577	0.024889041	-0.045629096	0.016150603	0.324362429
0.1968026568					
vietnamese	-0.002698781	-0.002469430	-0.048796664	0.012343885	0.196802657
0.2803938983					
cajun_creole	0.001062652	0.031234966	0.011825132	-0.021490701	-0.018487267
-0.0343841871					
brazilian	-0.019171605	0.048255311	-0.034305204	0.009885084	0.037504214
0.0003827035					
french	0.067070308	-0.056844030	0.013942594	0.009692366	0.010781123
0.0388558201					
japanese	0.012537403	-0.021460517	0.053036002	-0.005620020	-0.064962292
-0.0472924658					
irish	-0.007321213	0.002557315	-0.016209697	0.001030538	0.005745728
0.0084387344					
korean	0.034265736	-0.022860613	0.072835190	-0.013375570	-0.070128287
-0.0505086828					
moroccan	-0.022177223	0.004202726	0.005172325	0.010083727	-0.024867957
-0.0140860321					
ruddian	-0.023319595	0.019273851	-0.016822263	0.006635799	-0.014791945
0.0136597918					
	cajun_creole	brazilian	french	japanese	iris
h	korean				
greek	-0.014343851	-0.0408962464	0.027445449	0.024121835	-0.00712369
9 0.036238130					
southern_us	0.030773677	-0.0013019962	0.003870460	-0.005868054	0.00687404
9 -0.019768825					
filipino	0.026102729	0.0340058652	-0.034784010	-0.011210052	0.01170322
1 0.002105129					
indian	-0.009008762	0.0176546483	-0.048454300	0.021603560	0.01501663
3 -0.048297794					
jamaican	0.051368047	0.0281192997	-0.038394158	-0.020311035	0.01143161
0 -0.004543100					
spanish	-0.001557694	-0.0052184846	0.039744243	0.023353082	-0.01318022
9 0.026663990					
italian	0.001062652	-0.0191716045	0.067070308	0.012537403	-0.00732121
3 0.034265736					
mexican	0.031234966	0.0482553115	-0.056844030	-0.021460517	0.00255731
5 -0.022860613					
chinese	0.011825132	-0.0343052035	0.013942594	0.053036002	-0.01620969
7 0.072835190					
british	-0.021490701	0.0098850836	0.009692366	-0.005620020	0.00103053
8 -0.013375570					
thai	-0.018487267	0.0375042142	0.010781123	-0.064962292	0.00574572
8 -0.070128287					
vietnamese	-0.034384187	0.0003827035	0.038855820	-0.047292466	0.00843873
4 -0.050508683					
cajun_creole	0.339294505	0.0124597047	-0.017984178	-0.022800324	-0.00177032
5 0.012754504					

brazilian	0.012459705	0.2134326862	-0.020249654	-0.024754308	-0.00284512
8 -0.026935538					
french	-0.017984178	-0.0202496537	0.162615246	0.011604563	-0.01087466
8 0.003778188					
japanese	-0.022800324	-0.0247543076	0.011604563	0.275480485	-0.01256364
9 0.066469903					
irish	-0.001770325	-0.0028451279	-0.010874668	-0.012563649	0.09303799
0 -0.002486808					
korean	0.012754504	-0.0269355379	0.003778188	0.066469903	-0.00248680
8 0.237020498					
moroccan	-0.031480711	-0.0306273339	-0.002953055	0.018986704	0.00685824
8 0.012189003					
russian	-0.017494022	0.0099876969	0.010286026	0.010897573	0.00392518
2 -0.006793405					
	moroccan	russian			
greek	0.014472185	-0.0045733856			
southern_us	-0.012836308	-0.0144861274			
filipino	-0.029112681	0.0161711946			
indian	0.094437592	0.0174069822			
jamaican	0.002117208	-0.0129303082			
spanish	0.008323948	-0.0002389174			
italian	-0.022177223	-0.0233195951			
mexican	0.004202726	0.0192738511			
chinese	0.005172325	-0.0168222630			
british	0.010083727	0.0066357991			
thai	-0.024867957	-0.0147919451			
vietnamese	-0.014086032	0.0136597918			
cajun_creole	-0.031480711	-0.0174940220			
brazilian	-0.030627334	0.0099876969			
french	-0.002953055	0.0102860263			
japanese	0.018986704	0.0108975734			
irish	0.006858248	0.0039251819			
korean	0.012189003	-0.0067934049			
moroccan	0.303088888	0.0014208487			
russian	0.001420849	0.1489981795			



Cuisines-Residual-  
Matrix.csv

## Appendix D

### Cluster 1 Common Ingredients

active dry yeast	all-purpose flour	all purpose unbleached flour	avocado	baby spinach	baking powder	bananas	basmati rice
bay leaf	bay leaves	beef	beef broth	beef stock	bell pepper	black pepper	boiling water
boneless chicken skinless thigh	boneless skinless chicken breast halves	boneless skinless chicken breasts	bread	bread crumbs	broth	brown rice	brown sugar
butter	butternut squash	button mushrooms	canola oil	carrots	cayenne	cayenne pepper	celery
celery ribs	cherry tomatoes	chicken	chicken breasts	chicken broth	chicken drumsticks	chicken pieces	chicken stock
chicken thighs	chiles	chili flakes	chili pepper	chili powder	chives	chopped celery	chopped cilantro
chopped cilantro fresh	chopped fresh mint	chopped garlic	chopped onion	chopped parsley	cider vinegar	cinnamon	cinnamon sticks
clove	coarse salt	coconut oil	cold water	confectioners sugar	cooked chicken	cooking oil	cooking spray
corn oil	cracked black pepper	crushed red pepper	crushed red pepper flakes	cumin	curry powder	diced onions	diced tomatoes
dijon mustard	dried oregano	dried thyme	dry bread crumbs	dry red wine	dry white wine	egg whites	eggs
extra-virgin olive oil	fat free less sodium chicken broth	finely chopped onion	flat leaf parsley	flour	fresh cilantro	fresh lemon juice	fresh lime juice
fresh mint	fresh orange juice	fresh parsley	fresh thyme	freshly ground pepper	frozen peas	garlic	garlic cloves
garlic powder	garlic salt	ginger	granulated sugar	grated nutmeg	grated orange peel	grated parmesan cheese	green bell pepper
green onions	green peas	green pepper	ground beef	ground black pepper	ground cayenne pepper	ground cinnamon	ground cloves
ground coriander	ground cumin	ground ginger	ground nutmeg	ground pepper	ground red pepper	ground turmeric	ground white pepper
half & half	halibut fillets	heavy cream	honey	hot pepper sauce	hot water	jalapeno chilies	juice
kale	ketchup	kosher salt	large egg whites	large eggs	large garlic cloves	large shrimp	leeks

lemon	lemon juice	lemon slices	light brown sugar	lime	liqueur	long-grain rice	low salt chicken broth
low sodium chicken broth	mango	mayonaise	melted butter	milk	minced garlic	minced onion	oil
olive oil	onion powder	onions	orange	orange juice	orange zest	oregano	paprika
parsley	peas	pepper	peppercorns	plum tomatoes	pork loin	pork tenderloin	potatoes
powdered sugar	pumpkin	purple onion	quinoa	raisins	red bell pepper	red chili peppers	red pepper
red pepper flakes	red potato	red wine vinegar	rice	roasted tomatoes	roma tomatoes	russet potatoes	salmon fillets
salt	salt and ground black pepper	sauce	scallions	sea salt	seasoning	shallots	shortening
shrimp	smoked paprika	sour cream	soy sauce	spanish onion	spices	spinach	stewed tomatoes
sugar	sweet paprika	sweet potatoes	thyme	tomato paste	tomato sauce	tomatoes	turkey
unsalted butter	vanilla	vanilla extract	vegetable broth	vegetable oil	vegetable stock	warm water	water
whipping cream	white onion	white sugar	white vinegar	white wine vinegar	whole milk	yeast	yellow bell pepper
yellow onion	yukon gold potatoes	zucchini					



Cuisines-Cluster-1-Common.csv

## Cluster 2 Common Ingredients

all-purpose flour	apple cider vinegar	asian eggplants	asian fish sauce	avocado	baby bok choy	bacon	baking powder
baking soda	balsamic vinegar	bamboo shoots	bay leaf	bay leaves	bean threads	beans	beansprouts
beef	beef broth	beef rib short	beef sirloin	beef stock	beef tenderloin	bell pepper	black pepper
black peppercorns	boiling water	bok choy	boneless chicken skinless thigh	boneless chop pork	boneless pork shoulder	boneless skinless chicken breasts	bread
broccoli	broth	brown sugar	butter	button mushrooms	cabbage	canola oil	carrots
caster sugar	cauliflower	cayenne	cayenne pepper	celery	celery ribs	chicken	chicken breasts
chicken broth	chicken drumsticks	chicken legs	chicken pieces	chicken stock	chicken thighs	chicken wings	chile pepper
chiles	chili	chili flakes	chili paste	chili pepper	chili powder	chillies	Chinese cabbage
chives	chopped cilantro	chopped garlic	chopped onion	chuck	cider vinegar	cilantro	cilantro leaves
cinnamon	cinnamon sticks	clove	coarse salt	coarse sea salt	coconut	coconut aminos	coconut oil
cold water	cooked rice	cooked white rice	cooking oil	cooking spray	coriander	corn kernels	corn starch
crabmeat	cracked black pepper	crushed garlic	crushed red pepper	crushed red pepper flakes	cucumber	curry powder	daikon
dark brown sugar	dark sesame oil	dark soy sauce	deveined shrimp	dijon mustard	dipping sauces	dressing	dried shiitake mushrooms
dry white wine	egg whites	eggplant	eggs	extra-virgin olive oil	fine sea salt	finely chopped onion	firm tofu
fish	fish sauce	flank steak	flour	fresh cilantro	fresh ginger	fresh ginger root	fresh lemon juice
fresh mushrooms	fresh orange juice	fresh spinach	freshly ground pepper	fried eggs	garlic	garlic chili sauce	garlic cloves
garlic paste	garlic powder	ginger	ginger root	gingerroot	glass noodles	granulated sugar	grapeseed oil
green beans	green bell pepper	green cabbage	green chilies	green onions	ground beef	ground black pepper	ground cinnamon
ground coriander	ground ginger	ground pepper	ground pork	ground white pepper	heavy cream	hoisin sauce	honey
hot pepper	hot red pepper	hot water	ice cubes	jalapeno chilies	jasmine rice	jicama	kecap manis

	flakes						
ketchup	kirby cucumbers	kosher salt	large egg whites	large egg yolks	large eggs	leaves	leeks
lemon	lemon juice	lemongrass	lettuce leaves	light brown sugar	light soy sauce	lime juice	liquid
long-grain rice	long grain white rice	low sodium soy sauce	lower sodium soy sauce	mango	marinade	mayonaise	meat
medium shrimp	milk	minced garlic	minced ginger	miso	mung bean sprouts	mushrooms	napa cabbage
new york strip steaks	noodles	oil	olive oil	onions	orange	orange juice	oyster sauce
palm sugar	panko breadcrumbs	paprika	parsley	peanut oil	peanuts	peas	peeled fresh ginger
pepper	pineapple	plain flour	plum tomatoes	pork	pork belly	pork butt	pork chops
pork loin	pork loin chops	pork tenderloin	potatoes	prawns	purple onion	quinoa	radishes
ramen noodles	red bell pepper	red chili peppers	red pepper	red pepper flakes	red wine vinegar	reduced sodium chicken broth	rib eye steaks
rice	rice flour	rice noodles	rice vermicelli	rice vinegar	rice wine	sake	salt
sambal ulek	sauce	scallion greens	scallions	sea salt	seasoning	seeds	sesame oil
sesame seeds	shallots	shiitake	shredded cabbage	shredded carrots	shrimp	sirloin	sirloin steak
sliced green onions	sliced mushrooms	snow peas	soy sauce	spices	spinach	spring onions	squid
Sriracha	star anise	steak	steamed rice	sticky rice	stock	sugar	sugar pea
sweet chili sauce	sweet onion	sweet potatoes	Tabasco Pepper Sauce	tamari soy sauce	teriyaki sauce	thai chile	Thai fish sauce
toasted sesame seeds	tofu	tomato ketchup	tomato paste	tomatoes	turbinado	unsalted butter	vanilla extract
vegetable broth	vegetable oil	vegetable stock	vegetables	veggies	vinegar	warm water	water
water chestnuts	white onion	white pepper	white rice	white sesame seeds	white sugar	white vinegar	white wine
white wine vinegar	whole milk	wonton wrappers	worcestershire sauce	yellow onion	yellow squash	zucchini	



Cuisines-Cluster-2-Common.csv



### Cluster 3 Common Ingredients

2% reduced-fat milk	active dry yeast	all-purpose flour	all purpose unbleached flour	allspice	almond extract	almonds	apple cider vinegar
apples	applesauce	bacon	bacon slices	baking potatoes	baking powder	baking soda	balsamic vinegar
bay leaf	bay leaves	beaten eggs	beef	beef broth	beef stew meat	beef stock	beer
bittersweet chocolate	black pepper	black peppercorns	blackberries	boiling potatoes	boiling water	boneless skinless chicken breast halves	brandy
bread	bread crumb fresh	bread crumbs	bread flour	brown sugar	brussels sprouts	butter	buttermilk
button mushrooms	cabbage	cake	cake flour	candied orange peel	canola oil	capers	caraway seeds
carrots	caster sugar	cayenne	cayenne pepper	celery	celery ribs	celery seed	cheddar cheese
cheese	cherries	chicken bouillon	chicken broth	chicken stock	chives	chocolate	chopped celery
chopped fresh chives	chopped fresh sage	chopped onion	chopped parsley	chopped tomatoes	chopped walnuts	cider vinegar	cilantro
cinnamon	cinnamon sticks	clove	coarse salt	cocktail cherries	coffee	coffee granules	cold milk
cold water	confectioners sugar	cooked ham	cookies	cooking oil	cooking spray	corn oil	corn starch
cracked black pepper	cranberries	cream	cream cheese	cream cheese, soften	cream of tartar	crème fraîche	cremini mushrooms
crystallized ginger	cucumber	currant	dark brown sugar	dark chocolate	diced onions	diced tomatoes	dijon mustard
double-acting baking powder	dried apricot	dried cranberries	dried parsley	dried rosemary	dried thyme	dry bread crumbs	dry mustard
dry red wine	dry white wine	dry yeast	egg whites	egg yolks	eggs	extra-virgin olive oil	extra sharp white cheddar cheese
fat	fennel	fennel seeds	fine salt	fine sea salt	finely chopped fresh parsley	finely chopped onion	fish fillets
flat leaf parsley	flour	fresh chives	fresh cranberries	fresh dill	fresh ginger	fresh lemon juice	fresh mint
fresh mushrooms	fresh parsley	fresh raspberries	fresh rosemary	fresh spinach	fresh tarragon	fresh thyme	fresh thyme leaves

freshly ground pepper	frozen pastry puff sheets	frozen peas	fruit	garlic	garlic cloves	garlic powder	ginger
golden brown sugar	golden delicious apples	golden raisins	granny smith apples	granulated sugar	grated lemon peel	grated lemon zest	grated nutmeg
grated orange peel	greek yogurt	green beans	green bell pepper	green cabbage	green onions	green peas	ground allspice
ground beef	ground black pepper	ground cardamom	ground cinnamon	ground cloves	ground cumin	ground ginger	ground nutmeg
ground pepper	ground pork	ground turkey	half & half	ham	hard-boiled egg	hazelnuts	heavy cream
heavy whipping cream	herbs	Honey	horseradish	hot sauce	hot water	italian seasoning	jalapeno chilies
jam	juice	Kale	ketchup	kosher salt	large egg whites	large egg yolks	large eggs
large garlic cloves	leeks	Lemon	lemon juice	lemon rind	lemon wedge	lemon zest	lettuce leaves
light cream	light molasses	long-grain rice	low-fat sour cream	low salt chicken broth	mace	maple syrup	margarine
marjoram	mashed potatoes	mayonaise	meat	melted butter	mild olive oil	milk	milk chocolate
minced garlic	minced onion	mint leaves	molasses	mushrooms	mustard	new potatoes	nonfat yogurt
nonfat yogurt	nutmeg	Oil	olive oil	onions	orange	orange juice	orange marmalade
orange peel	oregano	paprika	parmigiano reggiano cheese	parsley	parsley sprigs	parsnips	pastry
pastry dough	peaches	Peas	peeled fresh ginger	pepper	peppercorns	plain flour	plum tomatoes
poppy seeds	pork butt	pork loin chops	pork sausages	pork shoulder	potatoes	powdered sugar	prepared horseradish
pure vanilla extract	purple onion	radishes	raisins	raspberries	raspberry preserves	red bell pepper	red potato
red wine vinegar	rhubarb	rolls	rosemary	rum	russet potatoes	salmon fillets	salt
salt and ground black pepper	sauce	sausages	scallions	sea salt	seasoning	semi-sweet chocolate morsels	semisweet chocolate
shallots	sherry vinegar	shortening	shredded cheddar cheese	sliced almonds	sliced carrots	sliced mushrooms	softened butter

sour cream	soy sauce	sprinkles	strawberries	sugar	superfine sugar	sweet onion	sweet potatoes
sweetened condensed milk	thyme	tomato paste	tomato purée	tomatoes	tumeric	turbinado	turnips
unsalted butter	vanilla	vanilla beans	vanilla extract	vanilla ice cream	vegetable broth	vegetable oil	vegetable oil spray
vegetable stock	vegetables	vinegar	walnut halves	walnuts	warm water	water	watercress
whipped cream	whipping cream	white bread	white onion	white pepper	white sugar	white vinegar	white wine
white wine vinegar	whole grain mustard	whole milk	whole wheat flour	whole wheat pastry flour	wild mushrooms	worcestershire sauce	yeast
yellow onion	yukon gold potatoes	zucchini					



Cuisines-Cluster-3-  
Common.csv

## Spanish Cuisine Unique Ingredients

aged Manchego cheese	almond oil	amontillado sherry	apple schnapps	ascorbic acid	atlantic cod fillets	blanco chees queso
blood sausage	boquerones	burrito seasoning mix	cabrales	carrot juice	cava	chorizo spanish
citrus vinaigrette	claws	demi baguette	fideos	fideos pasta	foccacia	garden cress
garlic mayonnaise	gravenstein apple	hibiscus tea	langoustines	linguisa	low sodium 96% fat free ham	low sodium vegetable juice
membrillo	morcilla	padron peppers	paella rice	pain au levain	peach vodka	piment despelette
pimenton de la vera	piquillo peppers	plain seltzer	pork sausage links	quince paste	reduced sodium garbanzos	regular cucumber
rice mix	rioja	roasted almond oil	saltpeter	sangria	smoked chorizo	sobrasada
sparkling sangria tradicional	strawberry compote	sweet chorizo	tomato jam	valencia rice		



Spanish-Unique.csv

## Moroccan Cuisine Unique Ingredients

arak	barley grits	Bordelaise sauce	chicken consomme	chuck short ribs	cooking salt	Crisco Pure Canola Oil
date molasses	flax egg	fresh dates	grana	hake fillets	heirloom squash	instant couscous
kosher wine	lamb cubes	lamb neck fillets	lamb seasoning	matzos	merguez sausage	moroccan seasoning
mushroom broth	organic vegetable stock	pareve margarine	pickle wedges	prune juice	puy lentils	Quorn crumbles
Saffron Road Vegetable Broth	sesame seeds buns	steak tips	turkey mince	white grape juice	whole wheat couscous	



Moroccan-Unique.csv

## Greek Cuisine Unique Ingredients

2% lowfat greek yogurt	aleppo	ammonium bicarbonate	baked pita chips	Betty Crocker™ oatmeal cookie mix	boneless skinless chicken thigh fillets	butter-flavored spray
Cavenders Greek Seasoning	curly leaf spinach	dillweed	dried apple rings	fresh spinach leaves, rins and pat dry	frozen basil	goat milk feta
grape vine leaves	grated kefalotiri	graviera	greek-style vinaigrette	Greek black olives	Greek dressing	Greek feta
greek seasoning mix	greek style seasoning	Hidden Valley® Greek Yogurt Original Ranch® Dip Mix	Homemade Yogurt	honey-flavored greek style yogurt	kalamata olive halves	kasseri
kefalotyri	lamb rib roast	lamb steaks	lean minced lamb	low-fat caesar dressing	low-fat feta	low-fat plain greek yogurt
low-fat white sauce	lowfat plain greekstyl yogurt	mahimahi fillet	mahlab	manouri	Mazola Canola Oil	Mezzetta Sliced Greek Kalamata Olives
myzithra	ouzo	pita loaves	pita wedges	pita wraps	pocket bread	pointed peppers
pork tenderloin medallions	raki	red wine vinaigrette	rusk	shank half	sliced kalamata olives	Stonefire Tandoori Garlic Naan
sunflower kernels	tarama	watermelon seeds	whole wheat pita bread rounds	whole wheat pita pockets	wish bone red wine vinaigrett dress	yogurt low fat
Yoplait® Greek 100 blackberry pie yogurt	Yoplait® Greek 2% caramel yogurt					



Greek-Unique.csv

## Italian Cuisine Unique Ingredients

(10 oz.) frozen chopped spinach	2% milk shredded mozzarella cheese	33% less sodium cooked deli ham	33% less sodium ham	8 ounce ziti pasta, cook and drain	abbamele
acini di pepe	aged gouda	alfredo sauce mix	anchovy filets	and cook drain pasta ziti	angel food cake mix
anise oil	artisan bread	asparagus bean	asti spumante	baby broccoli	balsamic vinaigrette salad dressing
barilla	Barilla Linguine	Barilla Oven-Ready Lasagne	barilla piccolini mini	Barilla Plus Pasta	barolo
Bartlett Pear	bâtarde	bertolli four cheeses rosa sauce	Bertolli Garlic Alfredo Sauce	bertolli organic tradit sauce	Bertolli Tomato & Basil Sauce
bertolli vineyard premium collect marinara with burgundi wine sauce	bertolli vodka sauce made with fresh cream	Bertolli® Alfredo Sauce	Bertolli® Arrabbiata Sauce	Bertolli® Classico Olive Oil	biga
bigoli	black grapes	black truffle oil	Bob Evans Italian Sausage	bocconcini	boneless beef rib eye steaks
boneless skinless turkey breasts	borlotti	borlotti beans	bottled balsamic vinaigrette	brandy extract	bread yeast
bread, cut into italian loaf	breadcrumb mix	bresaola	broiler chicken	brown rice penne	brown rice spaghetti
bucatini	buffalo mozzarella	buffalo mozzarella	bulb fennel	bulk italian sausage	burger style crumbles
burrata	caciocavallo	cake pound prepar	calabrese sausage	campanelle	campari
candied citron peel	canned salmon	cannelloni shells	cannoli shells	capocollo	caponata
cappuccino	cardoons	castellane	cavolo nero	ceci bean	chees mozzarella stick
cheese ravioli	cheese sticks	chestnut flour	chestnut spread	Chianti	chicken nugget
chilled prosecco	chilled seltzer	chioggia	chocolate fudge ice cream	chocolate leaves	chocolate milk
chocolatecovered espresso beans	chunky pasta sauce	chunky style pasta sauce	chunky tomato sauce	ciabatta buns	ciabatta roll
cilantro pesto	clam sauce	Classico Pasta Sauce	clementine juice	coffee low-fat frozen yogurt	cold-smoked salmon
cold meatloaf	conchiglie	cooked italian meatballs	cooked rigatoni	corn bread crumbs	country style italian bread
cream cheese with chives	cream cheese with chives and onion	crouton italian season	crumbled ricotta salata cheese	crushed saltines	crusty loaf

cubed pancetta	cucuzza	cured meats	cured pork	dandelion	DeLallo Extra Virgin Olive Oil
DeLallo Penne Ziti	ditalini	Domino Confectioners Sugar	dri basil leaves, crush	dried fettuccine	dried mission figs
dried pappardelle	dried pineapple	dried raspberry	dried rigatoni	dried tagliatelle	dry fettuccine
dry jack	dry lasagna	egg pasta	Estancia Pinot Noir	evaporated low-fat 2% milk	extra lean minced beef
farfalline	fat-free croutons	fat free lemon curd	fedelini	fettuccine, cook and drain	ficelle
fingerling	focaccia	fresh mozzarella balls	fresh pasta	fresh white truffles	friselle
frozen cheese ravioli	frozen lemonade concentrate, thawed and undiluted	frozen mini ravioli	frozen ravioli	garlic herb feta	garlic herb spreadable cheese
garlic olive oil	gelato	gemelli	german mustard	gluten-free spaghetti	gluten flour
gluten free lasagna noodle	gluten free marinara sauce	gnocchetti sardi	gnocchi	goat s milk cheese	Good Seasons Italian Dressing Mix
gorgonzola dolce	granita	grappa	grated parmesan romano	grated pecorino	gravy mix mushroom
green cauliflower	green figs	Green Giant™ sliced mushrooms	green pesto	ground hazelnuts	ground Italian sausage
hazelnut butter	Heinz Worcestershire Sauce	Hellmann's Dijonnaise Creamy Dijon Mustard	herb cheese	herb vinegar	Hidden Valley® Farmhouse Originals Italian with Herbs Dressing
high gluten bread flour	hoagi or roll	homemade meatballs	honeycomb tripe	hot cocoa mix	hot fudge topping
hot italian pork sausage	hot italian turkey sausage	hot pepperoni	huckleberries	imitation vanilla flavoring	italian-style meatballs
Italian cheese blend	italian chicken sausage	italian loaf	italian meatballs	italian pizza crust	italian rolls
italian sauce	Italian seasoned diced tomatoes	italian style rolls	Italian turkey sausage links	italian vinaigrette	Jimmy Dean All Natural Regular Pork Sausage
Johnsonville Mild Italian Sausage Links	Johnsonville® Mild Italian Ground Sausage	jumbo macaroni shells	jumbo shell pasta , cook and drain	jumbo shells	Kahlua Liqueur

Knorr Beef Stock Cubes	knorr italian side creami garlic shell	Knorr® Pasta Sides™ - Alfredo	Knorr® Pasta Sides™ - Butter & Herb	KNUDSEN 2% Milkfat Low Fat Cottage Cheese	Kraft Grated Parmesan Cheese
KRAFT Reduced Fat Shredded Mozzarella Cheese	KRAFT Shredded Low-Moisture Part-Skim Mozzarella Cheese	Kraft Sun Dried Tomato Vinaigrette	lady fingers	lambrusco	lasagna noodles, cooked and drained
lasagna sheets	lasagne	lecithin	levain bread	limoncello	linguine, cook and drain
links	liquid egg substitute	lobster stock	low-fat balsamic vinaigrette	low-fat bottled italian dressing	low-fat crème fraîche
low-fat firm silken tofu	low-fat goat cheese	low-fat marinara sauce	low-fat mozzarella cheese	low-fat parmesan cheese	low-fat pasta sauce
low-fat ricotta	low-fat soft goat cheese	low-fat spaghetti sauce	low-fat vegetable primavera spaghetti sauce	low fat chunky mushroom pasta sauce	low fat cream of celery soup
low fat mild Italian turkey sausage	low fat part skim ricotta chees	low fat reduced sodium pasta sauce	low moisture mozzarella	low sodium canned chicken broth	low sodium crushed tomatoes
low sodium fat free vegetable broth	low sodium low fat pasta sauce	low sodium parmesan cheese	low sodium tomato paste	manicotti	manicotti pasta
Margherita Pepperoni	marrons	matzo cake meal	meat-filled tortellini	meat extract	meat fats
Meyer lemon peel	minced peperoncini	mini pepperoni slices	miniature chocolate chips	mixed frozen seafood	moose
mostaccioli	mostarda	mozzarella balls	multi-grain penne pasta	New York Style Panetini® toasts	nonfat chicken broth
nonfat half-and-half	nonfat mozzarella cheese	nonpareils	oat milk	oil packed dried tomatoes	orange roughy fillet
orange soda	paccheri	pancetta slices	pane di casa	pappardelle	parmigiano reggiano
pasta rotel	pasta sheets	pasta shell small	pastina	penn pasta, cook and drain	peperoncino
pepperocini	perciatelli	petits pois	Philadelphia Light Cream Cheese	pignolis	Pillsbury Thin Pizza Crust
Pillsbury™ classic pizza crust	pinot grigio	pizza crust mix	porcini powder	pork sausage casing	potato gnocchi



pound cake mix	precooked meatballs	prego fresh mushroom italian sauce	preshred low fat mozzarella chees	Progresso Artichoke Hearts	Progresso Balsamic Vinegar
Progresso Diced Tomatoes	prosciutto fat	prosciutto	prosciutto di parma	purple grapes	quahog clams
quick yeast	Ragu Classic Alfredo Sauce	Ragu Golden Veggie Fettuccine Pasta	ragu old world style sweet tomato basil pasta sauc	ragu pizza quick sauc	Ragu Sauce
Ragu Traditional Sauce	Ragu® Robusto!® Pasta Sauce	ravioli	raw peeled prawns	red mustard	red vermouth
reduced fat alfredo sauce	reduced fat reduced sodium tomato and herb pasta sauce	reduced fat ricotta cheese	reduced sodium chicken stock	reduced sodium italian style stewed tomatoes	reduced sodium vegetable stock
refrigerated chocolate chip cookie dough	refrigerated dinner rolls	refrigerated four cheese ravioli	refrigerated seamless crescent dough	regular chicken broth	rennet
ricard	rigatoni or large tube pasta	Robert Mondavi Fume Blanc	robiola	romana	rotel pasta, cook and drain
rotini pasta, cook and drain	royal olives	salad seasoning mix	salted pistachios	salted roasted almonds	salted roasted pecans
sambuca	San Marzano Crushed Tomatoes	San Marzano Diced Tomatoes	sandwich wraps	Sangiovese	Sargento® Traditional Cut Shredded Mozzarella Cheese
sauce tomato	savoardi	scape pesto	seafood glaze	seasoned croutons	seasoning rub
semi-soft cheese	semi pearled farro	shark	shaved parmesan cheese	shiraz	short pasta
shortbread	shredded basil	shredded Italian cheese	shredded low-fat jarlsberg cheese	shredded low-fat mozzarella cheese	shredded romano cheese
Sicilian olives	skinless flounder fillets	slider rolls	small shells	smoked mozzarella	snaps
soft-shell clams	soft rolls	soup pasta	spaghetti sauce seasoning mix	speck	spicy salami
spiny lobsters	stolichnaya	Stonefire Italian Artisan Pizza Crust	Stonefire Italian Thin Pizza Crust	store-bought pound cake	strozzapreti
sumac powder	sun dried tomato dressing	Swanson Vegetable Broth	sweet italian pork sausage	sweet turkey sausage	t-bone steak
tagliarini	taleggio	tallow	tart crust	teardrop tomatoes	teleme

Tipo 00 flour	toasted sunflower seeds	tomato cream sauce	tomato garlic pasta sauce	top loin steaks	torpedo rolls
tortellini, cook and drain	tortelloni	traditional italian sauce	treviso	treviso radicchio	tuaca
Tuaca Liqueur	tubetti	tubettini	turbot	turkey giblet stock	turkey meatballs
turkey salami	uncooked rigatoni	unsalted beef stock	val	vanilla bean seeds	vanilla frozen yogurt
vanilla vodka	veal escalopes	veal loin	veal loin chops	veal medallions	veal scallopini
vegan coffee creamer	vegan parmesan cheese	vegetable-filled ravioli	vin santo	vodka sauce	wagon wheels
wheat berries	white almond bark	white arborio rice	white creme de cacao	white zinfandel	whole grain rotini
whole wheat angel hair pasta	whole wheat baguette	whole wheat berries	whole wheat bread cubes	whole wheat bread dough	whole wheat crackers
whole wheat fettuccine	whole wheat french bread	whole wheat fusilli	whole wheat lasagna noodles	whole wheat orzo	whole wheat penne rigate
whole wheat pizza crust	whole wheat rigatoni	whole wheat seasoned breadcrumbs	whole wheat sourdough bread	whole wheat spaghetti	whole wheat submarine loaves
whole wheat thin italian pizza crust	whole wheat uncooked lasagna noodles	wild garlic	wish-bone	wish-bone light country italian dressing	Wish-Bone® Robusto Italian Dressing



Italian-Unique.csv

## Jamaican Cuisine Unique Ingredients

ackee	amber rum	any	bagel chips	breadfruit	callaloo	Cara Cara orange
caribbean jerk seasoning	cherry syrup	cho-cho	codfish	dasheen	frozen fruit	guava paste
instant chicken bouillon	Jamaican allspice	jamaican curry powder	jamaican jerk	jamaican jerk marinade	jamaican jerk rub	jamaican jerk spice
jamaican pumpkin	jamaican rum	jerk paste	jerk rub seasoning	jerk sauce	jerk seasoning	jerk seasoning mix
low fat coleslaw dressing	passover wine	pickapeppa sauce	sazon goya with coriander and annatto	soursop	taro leaf	vegetable fats
veggie patties						



Jamaican-Unique.csv  
v

## Irish Cuisine Unique Ingredients

black pudding	butterscotch filling	caraway	cereal	Challenge Butter	chicken gravy mix	chocolate candy	chocolate cookie crumbs
cipollini	dried strawberries	fillet medallions	frozen mashed potatoes	gluten-free broth	graham flour	Guinness Lager	instant pudding mix
irish bacon	irish oats	Irish Red ale	Jameson Whiskey	jimmies	Kerrygold Pure Irish Butter	kumquats in syrup	maraschino
mint chocolate chip ice cream	morsels	pinhead oatmeal	porter	prepared coleslaw	savoy cabbage leaves	scones	soda bread
superfine white sugar	table wine	vegan bouillon cubes	young nettle				



Irish-Unique.csv

## Mexican Cuisine Unique Ingredients

(15 oz.) refried beans	2 1/2 to 3 lb. chicken, cut into serving pieces	2% low fat cheddar chees	40% less sodium taco seasoning	40% less sodium taco seasoning mix	95% lean ground beef	achiote	achiote paste
Adobo All Purpose Seasoning	agave tequila	america	anasazi beans	arepa flour	asadero	avocado dressing	avocado leaves
Azteca Flour Tortillas	baked corn tortilla chips	baked tortilla chips	bbq seasoning	bean dip	beef cheek	beef hot dogs	beer batter
Best Food's Mayonnai se with Lime Juice	blackpepper	blanco tequila	blue corn tortilla chips	bock beer	bolillo	bone-in ribeye steak	bone in
boneless beef round steak	boneless pork tenderloin	bottled low sodium salsa	bottom round roast	BREAKSTON E'S Sour Cream	Breakstone 's Sour Cream	brownie layer	Budweiser
cactus	cactus leaf	cactus pad	cactus paddles	cajeta	Campbell's Condensed Cheddar Cheese Soup	Campbell 's Condens ed Cream of Chicken Soup	Campbell's Condensed Tomato Soup
candied jalapeno	canela	canned beans	canned chicken	canned chicken breast	canned chipotles	canned jalapeno peppers	canola oil cooking spray
carbonate d beverages	carne asada	carnitas	cheese dip	cheese soup	cherry coke	chicharro n	chicken and rice soup
chicken chorizo sausages	chicken flavored rice	chicken in water	chihuahua cheese	chilcostle chile	chile colorado	chile con queso	chile negro
chile piquin	chile verde	chili con carne	chili seasoning mix	chiltepin	chip plain tortilla	chipotle	chipotle paste
chipotle puree	chocolate chip cookie mix	chocolate ice cream mix	chocolate liqueur	chop green chilies, undrain	chunky mild salsa	chunky tomato salsa	chunky tomatoes
cinnamon graham crackers	clamato juice	cod cheeks	coke zero	coleslaw dressing	comino	condense d fiesta nacho cheese soup	cones
corn niblets	country crock honey spread	creamed spinach	crema mexicana	crumbled cheese	crushed cheese crackers	crushed pistachio	Crystal Farms Reduced

							Fat Shredded Marble Jack Cheese
Daiya	dark lager	dinosaur kale	disco empanada frozen	doritos	Doritos Tortilla Chips	dri fruit tropic	dried chipotle pepper
dried cornhusks	dried hibiscus blossoms	egg beaters	empanada dough	empanada wrappers	fajita size flour tortillas	falafel	fat-free cheddar cheese
fat-free shredded cheddar cheese	fat free cream of mushroom soup	fat free whipped topping	fatfree cream of chicken soup	franks	Franks Hot Sauce	fresca	fresh masa
fresh mexican cheese	fresh poblano pepper	fritos	frozen limeade	frozen orange juice concentrate, thawed and undiluted	frozen potatoes	frozen tater tots	full fat sour cream
game	Gebhardt Chili Powder	ginger liqueur	gluten free cooking spray	gluten free corn tortillas	gluten free vanilla extract	Goya Extra Virgin Olive Oil	Goya Ground Cumin
Goya Hot Sauce	goya sazón	grated cotija	green chile sauce	green enchilada sauce	Green Giant Whole Kernel Sweet Corn	grilled chicken strips	ground turkey sausage
guacamole seasoning mix	guajillo chile powder	guanabana	havarti	Hellmann's Light Mayonnaise	hellmann's™ or best food canola cholesterol free mayonnais	Herdez Salsa	Herdez Salsa Casera
Herdez Salsa Verde	Hidden Valley® Original Ranch® Dips Mix	Hidden Valley® Original Ranch® Dressing	hierba santa	hoja santa	hoja santa leaves	hots	huitlacoche
Hurst Family Harvest Chipotle Lime Black Bean Soup mix	ibarra	Ibarra Chocolate	ic pop	Johnsonville Hot & Spicy Breakfast Links	Jose Cuervo Gold Tequila	Knorr Chicken Flavor Bouillon	knorr chicken flavor bouillon cube
knorr chipotle minicub	knorr cilantro minicub	knorr garlic minicub	Knorr Onion Minicubes	knorr parsley minicub	knorr pasta side cheesy cheddar	knorr reduced sodium chicken	knorr reduced sodium chicken flavor

						flavor bouillon	bouillon cube
knorr rice side cheddar broccoli	knorr tomato bouillon with chicken flavor	knorr tomato bouillon with chicken flavor cube	Knorr® Beef Bouillon	Knorr® Fiesta Sides™ - Mexican Rice	Knudsen Light Sour Cream	Knudsen Sour Cream	Kraft Big Slice Pepper Jack Cheese Slices
Kraft Mayonnaise	KRAFT Mexican Style 2% Milk Finely Shredded Four Cheese	KRAFT Mexican Style Finely Shredded Four Cheese	KRAFT Mexican Style Shredded Four Cheese with a TOUCH OF PHILADELPHIA	KRAFT Original Barbecue Sauce	Kraft Sharp Cheddar Cheese	KRAFT Shredded Colby & Monterey Jack Cheese	KRAFT Shredded Mozzarella Cheese
Kraft Shredded Pepper Jack Cheese	KRAFT Shredded Pepper Jack Cheese with a TOUCH OF PHILADELPHIA	KRAFT Zesty Lime Vinaigrette Dressing	Kroger Black Beans	La Victoria Red Chile Sauce	lamb strips	Land O Lakes® Butter	large flour tortillas
lean chuck roast	leftover gravy	leftover meat	limeade	limeade concentrate	lingcod	liquid sweetener	low-fat baked tortilla chips
low-fat cheddar	low-fat cheddar cheese	low-fat flour tortillas	low-fat monterey jack	low-fat refried beans	low-fat salad dressing	low-fat sesame- ginger dressing	low-fat shredded cheddar cheese
low-fat soy milk	low-fat vegetarian chili with beans	low fat monterey jack cheese	low fat shred cheddar cheese sharp variety	low fat tortilla chip	low sodium black beans	low sodium diced tomatoes	low sodium low fat vegetable broth
low sodium pinto beans	low sodium taco seasoning	mandarin juice	mango salsa	margarita salt	Martha White Cornbread Mix	masa	masa dough
Mazola® Chicken Flavor Bouillon Powder	McCormick Ground Cumin	McCormick Taco Seasoning	meat drippings	meat loaf mixture	meat seasoning	medium salsa	medium whole wheat tortillas
Mexican beer	mexican chocolate	mexican cooking sauce	Mexican lager beer	mexican style 4 cheese blend	Mexican vanilla extract	mexicorn	mezcal

Minute White Rice	Mission Corn Tortillas	Mission Yellow Corn Tortillas	mojo marinade	mole paste	mole poblano	mole sauce	mora chiles
mozzarella string cheese	muenster	nacho cheese tortilla chips	nacho chips	Neapolitan ice cream	new mexico chile pods	new mexico red chile powder	non dairy sour cream
nonfat cream cheese	nonfat frozen yogurt	nopales	nopalitos	nut meal	Old El Paso Enchilada Sauce	Old El Paso Green Chiles	Old El Paso Taco Seasoning Mix
Old El Paso™ chopped green chiles	Old El Paso™ mild red enchilada sauce	Old El Paso™ refried beans	Old El Paso™ taco seasoning mix	Old El Paso™ Thick 'n Chunky salsa	orchid	Ortega Tostada Shells	Pace Chunky Salsa
pace picante sauce	Pace Picante Sauce	panela	papalo	pasilla	pasilla chile pepper	pasta wagon wheel	peach salsa
peach sorbet	peeled canned low sodium tomatoes	pepper cheese	pepperidge farm puff pastry sheets	Pillsbury™ Crescent Recipe Creations® refrigerated seamless dough sheet	piloncillo	pina colada mix	pineapple salsa
pink beans	pisco brandy	poblano	poblano chilies	pork picnic roast	pork rub	pork sirloin roast	portuguese rolls
posole	potato nuggets	pozole	prepared guacamole	Progresso Black Beans	pumpkin seed mole	pumpkin seed oil	pumpkinseed kernels
Pure Wesson Canola Oil	Pure Wesson Vegetable Oil	queso anejo	queso asadero	queso blanco	queso crema	queso fresca	queso manchego
queso panela	radish slices	ragu cheesi doubl cheddar sauc	ragu old world style tradit pasta sauc	ranch dip	ranch salad dressing mix	Ranch Style Beans	raspberry sherbet
ratatouille	raw milk	ready-made pie crusts	red enchilada sauce	red quinoa	reduced fat italian dressing	reduced fat Mexican cheese	reduced fat shredded cheese
reduced sodium black beans	reduced sodium canned chicken broth	reduced sodium condensed cream of chicken soup	reduced sodium kidney beans	reduced sodium reduced fat cream of mushroom soup	reduced sodium refried beans	refried beans	regular or convert rice

reposado	rice milk	rich turkey stock	Ro-Tel Diced Tomatoes & Green Chilies	roasted garlic oil	roasted pepitas	roasted pumpkin seeds	rose hip tea bags
Rotel Diced Tomatoes & Green Chilies	salt free chili powder	salt free southwest chipotle seasoning	Sargento® Traditional Cut Shredded 4 Cheese Mexican	sauce mix	sazon	sazon seasoning	seasoned black beans
seasoned ground turkey	semisweet chocolate chunks	seville orange juice	shelled hemp seeds	shoulder steak	shredded American cheese	shredded low-fat cheddar	shredded low-fat cheddar cheese
shredded low-fat sharp cheddar	shredded lowfat monterey jack cheese	silver tequila	single malt Scotch	sirloin tip steak	skinless boneless turkey breast halves	sliced olives	smoked almonds
soft corn tortillas	soft taco size flour tortillas	southwest seasoning	soy crumbles	soya cheese	Spice Islands Bay Leaves	Spice Islands Garlic Salt	Spice Islands Ground Cumin Seed
Spice Islands Oregano	Spice Islands® Minced Garlic	spring mix	squash seeds	swanson chicken stock	sweet yellow corn	TABASCO® Chipotle Pepper Sauce	taco bell home originals
Taco Bell Taco Seasoning Mix	TACO BELL® HOME ORIGINALS® Taco Seasoning Mix	TACO BELL® Thick & Chunky Mild Salsa	taco meat	taco sauce	taco seasoned cheese	taco seasoning mix	taco seasoning reduced sodium
taco toppings	tamale filling	tamarind pod	tangelos	Tapatio Hot Sauce	tater tots	tex-mex shredded cheese	tex mex seasoning
textured soy protein	tomate verde	tomatillo salsa	tomato sauce low sodium	tortilla wraps	tostada shells	tostadas	tostitos
tricolor quinoa	tuna, drain and flake	turkey burger	turkey gravy	turkey ham	unhulled sesame seeds	v 8 juice	vegan cheese
vegetable soup	vegetarian chicken	vegetarian protein crumbles	vegetarian refried beans	Velveeta Cheese Spread	Velveeta Queso Blanco	venison roast	venison steaks
waffle fries	warm buns	watermelon radishes	wensleydale	white bread crumbs	white corn tortillas	white quinoa	white tequila
whole grain buns	whole wheat bread flour	whole wheat	whole wheat potato buns	whole wheat tortilla wraps	wish bone guacamol ranch dress	Wolf Brand Chili	yellowtail snapper fillets



		pasta shells					
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Mexican-Unique.csv

## Russian Cuisine Unique Ingredients

BACARDI® Mixers Margarita Mix	BACARDI® Superior	bear	beluga lentil	bermuda onion	blackcurrant syrup	buckwheat groats	cabbage head
canned peas and carrots	chopmeat	cocktail pumpernickel bread	cooked beetroot	creamed horseradish	creamer potatoes	dark rye flour	dark turkey meat
dried allspice berries	flaked oats	ground poppy seed	hen	herring fillets	hillshire farms low fat sausage	hoop cheese	hops
hungarian hot paprika	kasha	malt	mrs. dash seasoning mix	nonfat vanilla yogurt	parsley root	pierogi	poppy seed filling
pullman loaf	red russian kale	salmon caviar	sauerkraut juice	smoked rashers	snip fresh dill	soup bones	sour salt
splenda granular	sturgeon fillets	sweet biscuit crumbs	trout caviar	turkey hot dogs	tuscan sausage	Vegeta Seasoning	whole wheat cereal
wild asparagus							



Russian-Unique.csv

## Cajun Creole Cuisine Unique Ingredients

absinthe	Alexia Waffle Fries	andouille turkey sausages	banana bread	beef smoked sausage	beef stew seasoning mix
blue curaçao	boneless chops	bottled italian dressing	boudin	butter flavor shortening	butter salt
cabbage lettuce	cajun-creole seasoning mix	cajun remoulade	cajun style stewed tomatoes	Camellia Red Kidney Beans	carrot greens
celery flakes	champagne grapes	chocolate chip cookie dough ice cream	crabmeat frozen	creme de cacao	creole seafood seasoning
creole seasoning mix	creole spice mix	dip mix	Dole Seven Lettuces	duck drippings	essence seasoning
eye steaks	fiber one	filé	fresh flounder fillets	frozen cod fillets	Gourmet Garden garlic paste
Gourmet Garden Oregano	Gourmet Garden Parsley	green bellpepper	gumbo file	gumbo file powder	hazelnut flour
herbsaint	hickory-flavored liquid smoke	hickory smoke	Honeysuckle White® Hot Italian Turkey Sausage Links	ice cream salt	imitation seafood
jambalaya	jambalaya mix	jambalaya rice mix	Johnsonville Andouille	Johnsonville Andouille Dinner Sausage	Johnsonville Andouille Fully Cooked Sausage
JOHNSONVILLE Hot & Spicy Sausage Slices	Johnsonville Smoked Sausage	JOHNSONVILLE® Hot 'N Spicy Brats	Jonshonville® Cajun Style Chicken Sausage	Klondike Rose red skin potato	Knorr® Fiesta Sides Spanish Rice
Kraft Slim Cut Mozzarella Cheese Slices	large sausage casing	light kidney beans	long pasta	Louisiana Cajun Seasoning	low-fat tartar sauce
low sodium cajun seasoning	low sodium chili sauce	low sodium tomato	macaroni and cheese dinner	oil packed anchovies	Old Bay Blackened Seasoning
orange blossom extract	orange flavored brandy	Oscar Mayer Cotto Salami	peeled diced tomatoes	peppadews	Pillsbury Pie Crusts
Pompeian Canola Oil and Extra Virgin Olive Oil	prune puree	red drum	redfish	redfish fillet	reduced sodium cream of mushroom soup
reduced sodium ham	salt free cajun creole seasoning	salt free seasoning	Sargento® Artisan Blends® Shredded	satsuma juice	Smart Balance Cooking Spray

			Parmesan Cheese		
smoked turkey drumstick	spinach tortilla	sugar pearls	tony chachere's seasoning	turtle	Tuttorosso Diced Tomatoes
Uncle Ben's Ready Rice Whole Grain Brown Rice	V8 Juice	vegetable gumbo	whole grain English muffins	whole grain roll	whole turkey
worcestershire sauce low sodium	Zatarain's Jambalaya Mix	Zatarains Creole Seasoning			



cajun\_creole-unique.csv

## Brazilian Cuisine Unique Ingredients

açaí	acai juice	açaí powder	adobo style seasoning	arrow root	baobab fruit powder	barramundi fillets	bee pollen
brazil nuts	breakfast sausage links	cachaca	carne seca	cassava meal	cassava root flour	chimichurri	chipped beef
chocolate drink	chocolate milk mix	chourico	cuttlefish	dende oil	diced bacon	farofa	frozen banana
fruit puree	ground dried shrimp	Hawaiian salt	homemade stock	lemon lime beverage	licor 43	linguica	longaniza
low-fat chicken broth	maca powder	manioc flour	palm oil	paprika paste	pizza seasoning	pork tongue	protein powder
pure acai puree	raw buckwheat groats	sablefish	sazon goya	skate wing	sliced mango	Sugar in the Raw	unsweetened vanilla almond milk
xuxu	yucca root						



Brazilian-Unique.csv

## Indian Cuisine Unique Ingredients

alaskan king salmon	amba	apple puree	arctic char	arhar	arhar dal	artificial sweetener	asafetida (powder)
asafoetida powder	assam	baby goat	beef stew	bengal gram	besan (flour)	bhaji	Biryani Masala
black cumin seeds	black onion seeds	boneless skinless chicken tenderloins	breast	calabash	cashew milk	chai tea concentrate	chana dal
chapati flour	chapatti flour	cooked vegetables	cream yogurt	cubed mango	CURRY GUY Smoked Garam Masala	CURRY GUY Smoked Spicy Salt	curry leaf
curry mix	date sugar	dhal	dried arbol chile	dried barberries	dried neem leaves	Elmlea single	Elmlea Single Light
english breakfast tea	fenugreek	Flora Buttery	Flora Original	fresh curry	fresno pepper	fruit juice	full-fat plain yogurt
garbonzo bean	garlic naan	gram dal	granular sucrolose sweetener	ground asafetida	ground cashew	habanero powder	haloumi
hamachi fillets	hing (powder)	honey mustard dressing	idli	indian flat bread	Indian spice	kappa	kashmiri chile
keema	kewra	kewra essence	kewra water	kingfish	Knorr Chicken Stock Cubes	Knorr® Pasta Sides™ - Chicken flavor	kokum
korma paste	lamb leg steaks	legumes	light chicken stock	Lipton Lemon Iced Tea Mix	low fat plain yoghurt	Manischewitz Matzo Meal	Manischewitz Potato Starch
masoor dal	masur dal	mild curry paste	mooli	Nakano Seasoned Rice Vinegar	natural low-fat yogurt	Nido Milk Powder	no salt added canned tomatoes
non dairy yogurt	nonfat italian dressing	nonfat milk powder	panch phoran	papad	pappadam s	paratha	paste tomato
peaches in syrup	peanut powder	pink lentil	plain soy yogurt	poppadom s	poppyseed s	puffed rice	Quorn Chik"n Tenders
rajma	raspberry juice	rose essence	roti	shahi jeera	shark steak	skinless chicken fillets	small tomatoes
sourdough rolls	soy yogurt	sparkling lemonade	split black lentils	split yellow lentils	stone flower	sugarcane juice	tamari almonds

tandoori masala mix	tandoori paste	tandoori seasoning	tandoori spices	thick curds	ti leaves	tikka masala curry paste	toasted buns
tofu sour cream	true cinnamon	urad dal split	Vadouvan curry	vegan yogurt	vindaloo paste	wheat crackers	white bread slices
white poppy seeds	whole garam masala	whole grain spelt flour	yellow heirloom tomatoes	yoghurt natural low fat	yogurt cheese	yogurt dressing	



Indian-Unique.csv

## Filipino Cuisine Unique Ingredients

Accent Seasoning	ampalaya	annatto oil	annatto powder	bihon	blood	blueberri preserv	boneless steak
bottom round	calamansi juice	chinese duck sauce	coconut meat	cornstarch noodles	cream powder	cured chorizo	dark chocolate cocoa powder
distilled malt vinegar	dried shallots	filipino eggplant	fully cooked luncheon meat	Holland House White Wine Vinegar	kalamansi juice	kangkong	kinchay
lambs liver	lemon soda	long green pepper	lumpia skins	lumpia wrappers	luncheon meat	medium potatoes	milkfish
mini bananas	miswa	Mo Qua	Mountain Dew Soda	Nestle Table Cream	ox tongue	pancit	pancit bihon
pancit canton	pandan extract	pepper leaves	pink salt	pork heart	pork shanks	refined sugar	sago pearls
seafood base	small potatoes	sweet cream butter					



Filipino-Unique.csv

## Chinese Cuisine Unique Ingredients

33% less sodium smoked fully cooked ham	abalone	agar agar flakes	angled loofah	Argo Corn Starch	asian black bean sauce	bai cai	barley flakes
bean curd stick	black bean sauce with garlic	black bean stir fry sauce	black chicken	black fungus	black garlic	black moss	black mushrooms
black rice vinegar	bottled chili sauce	braising beef	calamari steak	cauliflowers	center cut pork roast	century eggs	char
char siu	char siu sauce	chenpi	chile bean paste	chinese baby corn	chinese barbecue sauce	chinese black bean	chinese buns
chinese celery cabbage	chinese ham	chinese hot mustard	chinese jujubes	chinese pancakes	chinese pea pods	chinese pepper	chinese plum sauce
chinese radish	chinese red rice vinegar	chinese red vinegar	Chinese rice vinegar	chinese roast pork	Chinese rose wine	Chinese sesame paste	chinese winter melon
chinese wolfberries	chopped cooked meat	Cinnamon Toast Crunch Cereal	citric acid powder	cloud ear fungus	comice pears	crosswise	dark meat
diced mushrooms	Doubanjiang	double-dark soy sauce	dried black mushrooms	dried cloud ears	dried oysters	dried prawns	dried scallops
duck bones	duck sauce	dumpling dough	dumpling skins	e-fu noodle	egg roll skins	fat free ground turkey breast	fermented bean curd
fermented bean paste	fermented black beans	fillet of beef	flavored wine	flowering garlic chives	forest mushroom	fresh chicken stock	fried wonton strips
frozen garden peas	frozen petit pois	frozen popcorn chicken	frozen seafood	fructose	garland chrysanthemum	ginkgo nut	ginseng tea
gluten-free chicken stock	gluten-free oyster sauce	gluten-free tamari sauce	goma	grain alcohol	green soybeans	ground roasted sichuan peppers	ground sichuan pepper
high-gluten flour	hong kong-style noodles	Imperial Sugar Light Brown Sugar	karo	Kikkoman Less Sodium Soy Sauce	Kikkoman Oyster Sauce	king oyster mushroom	knorr homestyle stock beef
Kung Pao sauce	lamb breast	lap cheong	lapsang souchong	leftover steak	lily buds	lily flowers	lipton pure leaf

							unsweetened iced tea
Lipton Sparkling Diet Green Tea with Strawberry Kiwi	liquorice	lo bok	long green	long green chilies	longan	loose leaf black tea	lop chong
lotus leaves	lotus seed paste	low sodium stock	Mae Ploy Sweet Chili Sauce	maltose	mandarin pancakes	mantou	mein
mi	mian	minute steaks	mung bean vermicelli	nappa cabbage	nian gao	old ginger	organic soy sauce
oyster-flavor sauc	pancake batter	pangasius	peapods	petrale sole	pineapple chunks in natural juice	pineapple syrup	plum jam
plum wine	popcorn chicken	potato starch flour	potsticker wrappers	rape	red vinegar	reduced sodium chicken bouillon granules	reduced sugar orange marmalade
refrigerated bread dough	regular sugar	roast duck meat	salted seaweed	sea cucumber	sesame seed paste	shanghai bok choy	shanghai noodles
shaoxing	sichuan peppercorn oil	sichuanese chili paste	side pork	skinless and boneless chicken breast fillet	skinless chicken breast fillets	smithfield ham	soy marinade
soy nuts	Soy Vay® Hoisin Garlic Marinade & Sauce	Soy Vay® Toasted Sesame Dressing & Marinade	store bought low sodium vegetable stock	suckling pig	sweet & sour stir fry sauce	sweet bean paste	sweet bean sauce
sweet soy	sweetened red beans	szechuan sauce	Tamari Tamari	tangzhong roux	tea cake	tiger lily buds	tree ears
Tyson Crispy Chicken Strips	unsweetened dried coconut	vegan chicken flavored bouillon	water chestnut powder	whole grain thin spaghetti	wieners	wing sauce	Wish-Bone Light Italian Dressing
won ton skins	wonton noodles	wood mushrooms	yellow chives	yu choy			



Chinese-Unique.csv

## Japanese Cuisine Unique Ingredients

A Taste of Thai Rice Noodles	abura age	aka miso	aloe juice	amberjack fillet	aonori	aramé	asakusa nori
awase miso	baby radishes	baby turnips	barley miso	bass	beet juice	braggs liquid aminos	branzino fillets
brill	brown beech mushrooms	burger rolls	buttercup squash	butternut	Chartreuse Liqueur	chive blossoms	chuno sauce
cod roe	crab sticks	cracked wheat	curry sauce mix	daikon sprouts	darjeeling tea leaves	dark miso	dashi powder
delicata squash	dhaniya powder	dried bonito	dried fish flakes	dried sardines	Earth Balance Buttery Spread	extra firm silken tofu	flowering chinese chives
genmai miso	gobo root	gomashio	gravlax	hakusai	harusame	hatcho miso	heeng
herb dressing	hijiki	ikura	instant tea powder	Japanese Mayonnaise	japanese pumpkin	japanese radish	kamaboko
kampyo	karashi	kasu	katakuriko	katsuo bushi	katsuo dashi	king crab	king salmon
komatsuna	konnyaku	lemon cucumber	lemon twists	light cream or half and half	lipton green tea bag	lox	maitake mushrooms
masago	matcha	matsutake mushrooms	McCormick Ground White Pepper	McCormick Poppy Seed	mellow white miso	mentaiko	mentsuyu
miso sesame grilling sauce	mitsuba	Mizkan Oigatsuo Tsuyu Soup Base	Mizkan Rice Vinegar	mochi	nigari tofu	nonfat dried milk	nori furikake
nori paper	ogura-an	orgeat syrup	red chard	saki	salmon sashimi	salsify	sansho
sato imo	savoy spinach	sea bream	sesame butter	shiromiso	shishito chile	shoga	shredded bamboo
shungiku	smoked eel	sodium free chicken broth	Soy Vay® Veri Veri Teriyaki® Marinade & Sauce	soya flour	steak fillets	stem ginger	sushi grade tuna
sushi vinegar	sweet white miso	sweet white miso paste	tempura batter	tobiko	Tokyo negi	tongue	tonic water
tonkatsu sauce	Truvia® natural sweetener	umeboshi	umeboshi paste	umeboshi vinegar	unagi	uni	usukuchi soy sauce



vegetable demi-glace	vegetable slaw	wasabe	winesap	yaki-nori	yam noodles	yellowfin	yellowtail
yuzu	yuzu juice	Yuzukosho					



Japanese-Unique.csv

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## Vietnamese Cuisine Unique Ingredients

anise basil	anise powder	asian	asian basil	balm	balm leaves	banh hoi	banh pho rice noodles
broccoli romanesco	chicken egg	cinnamon candy canes	Conimex Wok Olie	Conimex Woksau Specials Vietnamese Gember Knoflook	do chua	dragon fruit	dried wood ear mushrooms
drum	dulong	eye of the round	fine egg noodles	Foster Farms boneless skinless chicken breasts	french style sandwich rolls	granulated tapioca	hero rolls
hubbard squash	laksa paste	liverwurst	long buns	low-fat sweetened condensed milk	nuoc cham	nuoc nam	opo squash
oyster liquor	pork roll	rice paddy herb	roast pork seasoning mix	shrimp chips	small yellow onion	thin rice stick noodles	toasted nuts
tri-tip steak	tuong	vietnamese rice paper	whole grain baguette	wish-bone light asian sesame ginger vinaigrette dressing	yam bean		



Vietnamese-Unique

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## Thai Cuisine Unique Ingredients

asian dressing	Asian sweet chili sauce	baby tatsoi	banana flower	basa fillets	belacan	bird pepper	blacan
boy choy	burro banana	chicken salad	ciabatta loaf	cooked fettuccini	cucumber salad	cuttlefish balls	dairy free coconut ice cream
dark chicken stock	dried mango	Flora pro.activ	greater galangal	hamachi	Heinz Tomato Ketchup	japanese peanuts	japanese style bread crumbs
Jasmine brown rice	Jif Creamy Peanut Butter	kelp noodles	kha	Kim Crawford Sauvignon Blanc	Knorr Fish Stock Cubes	knorr pasta side	lapsang
less sodium mushroom flavored soy sauce	lesser galangal	light brown muscavado sugar	low-fat canned coconut milk	maifun	nam prik	nama shoyu	ngo gai
organic granulated sugar	organic low sodium chicken broth	oriental radish	panang curry paste	pandan essence	pea eggplants	pearl rice	poi
pummelo	ramen noodle soup	raw prawn	red vinegar white white, wine,	reduced fat chunky peanut butter	riblets	roasted chili paste	skinless snapper fillets
Skippy Creamy Peanut Butter	smooth natural peanut butter	sodium free chicken stock	sodium reduced chicken broth	soy-based liquid seasoning	soybean oil	spicy mayonnaise	sturgeon
sugar cane juice	sunflower seed butter	table syrup	tamarind purée	thai black glutinous rice	Thai eggplants	thai noodles	tom yum paste
turkey breast steaks	wheat beer						



Thai-Unique.csv

## British Cuisine Unique Ingredients

au jus gravy	bacon rind	beef drippings	beef kidney	bénédictin e	blackberry brandy	bran flakes	branstons pickle
brown sauce	carnation condensed milk	chocolate covered english toffee	citrus peel	coffee extract	cold coffee	Colman's Mustard Powder	Cox's Orange Pippin
crumpet	cumberland sausage	custard dessert mix	dipping chocolate	double crust	elderflower cordial	english walnuts	fine grain salt
fruitcake	gelatin sheet	goose liver	granary bread	gravy granules	ground nuts	India Pale Ale	kippered herring fillets
kippers	lamb bouillon cube	lamb kidneys	light lager	low-fat vanilla ice cream	low sodium beef bouillon granules	mashed cauliflower	meringue nests
milk chocolate pieces	minced lean steak	mincemeat pie filling	orange roughy	Pam Cooking Spray	pippin apples	porridge oats	poundcake
powdered sugar icing	puff paste	red currants	rum raisin ice cream	scrod	semisweet vegan chocolate chips	seville oranges	shaved chocolate
skinless cod fillets	skinless haddock	smoked mackerel	sodium reduced beef broth	soft margarine	sparkling rosé wine	standing rib roast	stilton
strawberry yogurt	strip loin	swede	sweet white wine	tart filling	toffee sauce	topside steak	truffle butter
vanilla custard	veal bones	veal kidneys	wine syrup				



British-Unique.csv

## Southern United States Cuisine Unique Ingredients

33% less sodium cooked ham	american cheese food	and carrot green pea	anise liqueur	apple slice	au jus gravy mix	baby beets	baby okra
back ribs	baking sugar	banana puree	barbecue seasoning	Better Than Bouillon Chicken Base	blackstrap molasses	boneless moulard duck breast halves	bourbon liqueur
Boursin	braeburn apple	branca menta	Breyers® Natural Vanilla Ice Cream	butter cake	butter crackers	butter extract	butter flavor vegetable shortening
butter pecan ice cream	buttermilk biscuits	buttermilk ranch dressing	buttermilk self-rising white cornmeal mix	cake mix or white yellow	candied bacon	caramel ice cream topping	caramel syrup
celery powder	celery tops	cherry gelatin	chicken flavor stuffing mix	chicken gravy	chicken heart	chicken pan drippings	chocolate extract
chocolate frosting	chocolate graham cracker crumbs	chocolate graham crackers	chocolate sandwich cookies	cholesterol free egg substitute	chowchow	cinnamon hot candy	citrus slices
clementine sections	clover honey	coconut chips	coconut syrup	cola-flavored carbonated beverage	cola soft drink	collards	condensed cream of broccoli soup
cooki vanilla wafer	corn muffin	cornbread crumbs	country gravy	cream ic peach	cream of tomato soup	creamy gravy	Crisco Pure Vegetable Oil
crumb crust	crumb topping	crumbled corn bread	crushed peppermint candy	crushed pretzels	Crystal Farms Butter	Crystal Farms Shredded Gouda Cheese	Crystal Farms® Shredded Cheddar Cheese
dark ale	deviled ham	diet dr. pepper	double smoked bacon	dr. pepper	Earth Balance Natural Buttery Spread	eggnog	energy drink
english breakfast tea leaves	evapor low-fat milk	Everglades Seasoning	fine grind white cornmeal	Fisher Pecan Halves	Fisher Pecans	freeze-dried strawberries	frozen blackberries
frozen cherries	frozen cranberry juice	frozen onion rings	fryers	fudge cake mix	Galliano	garlic pepper blend	george dickel

	concentrate						
glucose syrup	gluten-free baking powder	gluten-free bread	gluten-free pie crust	gluten-free rolled oats	gluten free barbecue sauce	gluten free chicken broth	gluten free cornmeal
graham cracker pie crust	granular no-calorie sucralose sweetener	gravy master	green tomato relish	grit quick	ground sumac	hard cheese	Heath Candy Bars
Heinz Ketchup	herb seasoned stuffing	herb seasoned stuffing mix	Hidden Valley® Original Ranch® Spicy Ranch Dressing	high-fructose corn syrup	hominy grits	honey graham crackers	honey liqueur
honey whiskey	house seasoning	iced tea	instant banana cream pudding	instant butterscotch pudding mix	instant oats	instant tapioca	Italian seasoned panko bread crumbs
Jack Daniels Whiskey	Jagermeister Liqueur	jamon serrano	Jimmy Dean Pork Sausage	Jose Cuervo	Karo Corn Syrup	karo syrup	kielbasa (not low fat)
Kraft Extra Sharp Cheddar Cheese	ladys house seasoning	leek tops	lemon cake mix	lemon pudding	less sodium fat free chicken broth	light whipping cream	lipton onion soup mix
lipton recip secret golden onion soup mix	lipton tea bags	Lipton® Iced Tea Brew Family Size Tea Bags	low-fat sharp cheddar cheese	low-fat vanilla wafers	low fat graham cracker crumbs	low sodium jarred chicken soup base	madagascar bourbon vanilla extract
Makers Mark Whisky	maple flavored extract	margarine spread	Marshmallow Fluff	marshmallow vodka	McCormick Parsley Flakes	McCormick® Pure Vanilla Extract	medium cheddar cheese
melted fat	mesquite flavored seasoning mix	mild sausage	milk chocolate kisses	mint extract	mint syrup	moonshine	multigrain cereal
muscadine grapes	Nielsen-Massey Vanilla Extract	Nilla Wafers	no-calorie sweetener	non-dairy margarine	nondairy whipped topping	nonfat vanilla frozen yogurt	nonhydrogenated margarine
old fashioned stone ground grits	olive oil mayonnaise	one third less sodium chicken broth	orange glaze	orange pekoe tea	organic buttermilk	ornamental kale	Pam No-Stick Cooking Spray

peach juice	peach pie filling	peach purée	peaches in heavy syrup	peaches in light syrup	peanut brittle	pecan meal	pecan pie
perch fillets	pie filling	poppy seed dressing	pork chops, 1 inch thick	pot pie	powdered egg whites	praline syrup	praline topping
process cheese spread	quick-cooking hominy grits	ranch-style seasoning	red grapefruit juice	red velvet cake mix	reduced fat cream of mushroom soup	reduced fat whipped topping	reduced sodium smoked ham
reduced sugar ketchup	roasted bell peppers	roasted ground cumin	root beer	Royal Baking Powder	rub seasoning	rustic rub	sack
salt free herb seasoning	schnapps	seafood breader	seasoned panko bread crumbs	semi sweet mini chocolate chips	sheepshead	sloe gin	smoked bratwurst
smoked hog jowl	smoked pork neck bones	soft sandwich rolls	sorghum	sorghum molasses	sorghum syrup	southern comfort	Southern Comfort Liqueur
sports drink	stick butter	straight bourbon whiskey	strawberry extract	strawberry gelatin	Success White Rice	sucralose sweetener	sundae syrup
sweet pickle juice	sweet tea	sweetbreads	swiss steak	Texas Pete Hot Sauce	thickeners	toffee bits	Truvia® Baking Blend
tupelo honey	turbot fillets	unsalted pecans	unsweetened iced tea	vanilla almondmilk	vanilla bean ice cream	vanilla cake mix	vanilla cream
vanilla glaze	vanilla low-fat frozen yogurt	vegetable gumbo mixture	verjuice	whipped dessert topping	white baking bar	white corn syrup	white frostings
white grapefruit juice	White Lily Flour	whole baby okra	whole crab	whole wheat sandwich bread	Wholesome Sweeteners Organic Sugar	wildflower honey	yoplait



southern\_us-unique.csv

## French Cuisine Unique Ingredients

accompagnement	almond syrup	Amarena cherries	apricot jelly	aquavit	banana extract	basil olive oil
beaujolais	beef shin	benne seed	beurre manié	black cherries	black sea bass	blueberry pie filling
boned duck breast halves	boned skinned duck breast halves	boneless duck breast halves	boneless magret duck breast halves	brioche bread	buckwheat honey	burgundy snails
burgundy wine	cabernet	camembert	candied chestnuts	canned snails	cannelloni	cantal
caramel flavored syrup	cassis liqueur	Castelvetrano olives	Chambord Liqueur	char fillets	chateaubriand	cheese curds
cherry vanilla ice cream	cherry vinegar	chocolate flavored liqueur	chocolate mousse	chocolate sticks	cinnamon ice cream	cipollini onions
conger eel	cooked deli ham	cortland apples	coulis	crabapples	crème de framboise	cross rib roast
crushed peppercorn	crusty whole wheat toast	culinary lavender	dark crème de cacao	dried lavender blossoms	dried lavender flowers	duck liver
ducklings	edible gold leaf	egg bread	english breakfast tea bags	escargot	extra	fat-free parmesan cheese
fish bones	flageolet	flower petals	foie gras terrine	food gel	food paste color	fowl
framboise liqueur	frangipane	frankfurters	frozen sweetened raspberries	fuji apples	garbanzo bean flour	genoise
glace de viande	glucose	gluten-free oat	goose	goose fat	guinea hens	hachiya
haricot beans	helix snails	hen of the woods	Hogue Cabernet Sauvignon	hyssop	icing mix	instant chicken bouillon granules
jambon de bayonne	kamut flour	knockwurst	lady apples	large snails	lavender flowers	lavender honey
leg of veal	lemon olive oil	lemon verbena	lemon vodka	less sodium reduced fat ham	light margarine	light tuna
lillet	liver sausage	low-fat coffee ice cream	low-fat deli ham	low-fat turkey kielbasa	macarons	madeleine
malt powder	malted milk powder	marrons glacés	meat glaze	mineral water	mousse	muscadet
muscovy	nonfat block cream cheese	oat groats	ocean perch	oil of orange	organic butter	osetra caviar

pansies	pastis	pastry tart shell	pâte brisée	peanut butter chips	pekin duck breast halves	Pepperidge Farm Puff Pastry Sheets
peppermint schnapps	Pernod Liqueur	pike	pink food coloring	pinot blanc	pistou	plain chocolate
poolish	pork loin rib chops	poured fondant	praline	psyllium husks	puff pastry cups	pumpernickel
purple potatoes	raclette	raspberry fruit spread	raspberry lambic	Reblochon	red anjou pears	redcurrant jelly
reduced sodium chicken flavor stuffing mix	rendered duck fat	rock cornish game hens	roquefort	rouille	saba	salted anchovies
samphire	sherbet	skinless mahi mahi fillets	skinned boned duck breast halves	sliced beets	smoked trout fillets	smoked whitefish
snail shells	snow crab	soft-shelled crabs	spot prawns	squid tube	St Germain Liqueur	stellette
swiss	tart cherries	tartlet shells	teff	toast points	Toulouse sausage	truffle puree
unsmoked bacon	unsweetened baking chocolate	veal breast	veal knuckle	violets	water crackers	white tuna
whole wheat english muffins	whole wheat peasant bread	winter savory	young leeks			



French-Unique.csv



## Korean Cuisine Unique Ingredients

angus	azuki bean	beef carpaccio	black radish	bone-in short ribs	chrysanthemum	chuck tender	dangmyun
dark soy	doenzang	fat-trimmed beef flank steak	fern	fiddlehead ferns	gluten-free penne	gochugaru	habas
ketjap	kim chee	kimchi juice	kochu chang	korean buckwheat noodles	korean chile	korean chile paste	korean vermicelli
mandarin orange juice	melissa	mustard sauce	nashi	pancake mix	pear juice	reduced sodium beef stock	rice syrup
riso	sandwich steak	sesame salt	soy glaze	strip loin steak	sweet potato vermicelli	Taiwanese bok choy	umeboshi plum vinegar
wondra							



Korean-Unique.csv