```
In [11]:  import pandas as pd
          import numpy as np
          import matplotlib as mpl
          import matplotlib.pyplot as plt
          import scipy as sci
          from scipy.stats import ttest_ind
          import seaborn as sns
          from os import path
          from PIL import Image
          from wordcloud import WordCloud, STOPWORDS, ImageColorGenerator
          import matplotlib.pyplot as plt
```

```
In [12]:  wine_data = pd.read_csv('winemag-data_first150k.csv', sep = ',', encoding = 'u
          tf-8', header = 0 )
```

```
In [13]:  df = pd.read_csv('winemag-data-130k-v2.csv', sep = ',', encoding = 'utf-8', he
          ader = 0)
```

```
In [14]:  wine_data = wine_data.append(df, ignore_index = True)
```

```
C:\Users\sammy\Anacondanew\lib\site-packages\pandas\core\frame.py:6211: Futur
eWarning: Sorting because non-concatenation axis is not aligned. A future ver
sion
of pandas will change to not sort by default.

To accept the future behavior, pass 'sort=False'.

To retain the current behavior and silence the warning, pass 'sort=True'.

  sort=sort)
```

```
In [15]:  wine_data['points'] = (wine_data['points'] - 80)/2
```

```
In [16]:  top_bsrd = wine_data.loc[wine_data['variety'] == 'Bordeaux-style Red Blend']
```

In [17]: `top_bsrd.sort_values(by=['points'], ascending = False)`

Out[17]:

	Unnamed: 0	country	description	designation	points	price	province	region_1
209282	58352	France	This is a magnificently solid wine, initially ...	NaN	10.0	150.0	Bordeaux	Saint-Julien
262683	111753	France	Almost black in color, this stunning wine is g...	NaN	10.0	1500.0	Bordeaux	Pauillac
262685	111755	France	This is the finest Cheval Blanc for many years...	NaN	10.0	1500.0	Bordeaux	Saint-Émilion
268988	118058	US	This wine dazzles with perfection. Sourced fro...	La Muse	10.0	450.0	California	Sonoma County
262686	111756	France	A hugely powerful wine, full of dark, brooding...	NaN	10.0	359.0	Bordeaux	Saint-Julien
262688	111758	France	Stern, almost severe initially, this great win...	NaN	9.5	NaN	Bordeaux	Pauillac
267024	116094	France	98-100 Barrel sample. Sumptuous, opulent, with...	Barrel sample	9.5	NaN	Bordeaux	Margaux
131383	131383	France	98-100 Barrel sample. Sumptuous, opulent, with...	Barrel sample	9.5	NaN	Bordeaux	Margaux
131385	131385	France	98-100 Barrel sample. A superb wine, with the ...	Barrel sample	9.5	NaN	Bordeaux	Pauillac
106485	106485	France	98-100 Barrel sample. A superb wine, with the ...	Barrel sample	9.5	NaN	Bordeaux	Pauillac
34920	34920	France	A big, powerful wine that sums up the richness...	NaN	9.5	2300.0	Bordeaux	Pauillac

	Unnamed: 0	country	description	designation	points	price	province	region_1
142677	142677	France	98-100 Barrel Sample. This has to be the wine ...	Barrel sample	9.5	NaN	Bordeaux	Pauillac
106483	106483	France	98-100 Barrel sample. Sumptuous, opulent, with...	Barrel sample	9.5	NaN	Bordeaux	Margaux
267025	116095	France	98-100 Barrel sample. A superb wine, with the ...	Barrel sample	9.5	NaN	Bordeaux	Pauillac
54343	54343	France	98-100 Barrel sample. Sumptuous, opulent, with...	Barrel sample	9.5	NaN	Bordeaux	Margaux
54345	54345	France	98-100 Barrel sample. A superb wine, with the ...	Barrel sample	9.5	NaN	Bordeaux	Pauillac
262687	111757	France	A big, bold wine with unbelievable power and c...	NaN	9.5	NaN	Bordeaux	Saint-Émilion
267070	116140	US	This blend from individual blocks includes 94%...	ERA	9.5	300.0	California	Napa Valley
152489	1559	France	A beautiful wine, with the firmest tannins sur...	NaN	9.0	380.0	Bordeaux	Margaux
262689	111759	France	A great wine that is just starting out. The hi...	NaN	9.0	NaN	Bordeaux	Margaux
262691	111761	France	A firm and serious wine, complex and complicat...	NaN	9.0	NaN	Bordeaux	Pessac-Léognan
152488	1558	France	A massive wine for Margaux, packed with tannin...	NaN	9.0	1900.0	Bordeaux	Margaux

	Unnamed: 0	country	description	designation	points	price	province	region_1
267027	116097	France	97-99 Barrel sample. A wonderfully structured ...	Barrel sample	9.0	NaN	Bordeaux	Pauillac
34924	34924	US	A stunning Pirouette—63% Cabernet Sauvignon, 2...	Red Wine	9.0	50.0	Washington	Columbia Valley (WA)
262692	111762	France	A dense, smooth and opulent wine bursting with...	NaN	9.0	NaN	Bordeaux	Pauillac
52260	52260	US	This year's Matriarch is very similar to Harla...	The Matriarch	9.0	90.0	California	Napa Valley
152490	1560	US	A stunning Pirouette—63% Cabernet Sauvignon, 2...	Red Wine	9.0	50.0	Washington	Columbia Valley (WA)
34926	34926	France	A major success of the vintage. The wine exhib...	NaN	9.0	135.0	Bordeaux	Saint-Julien
34923	34923	France	A beautiful wine, with the firmest tannins sur...	NaN	9.0	380.0	Bordeaux	Margaux
34922	34922	France	A massive wine for Margaux, packed with tannin...	NaN	9.0	1900.0	Bordeaux	Margaux
...	...	...	...	...	...	...	...	...
60653	60653	US	This is a Bordeaux blend but it could be any s...	Rominger Ranch Red	0.5	22.0	California	Yolo County
249295	98365	France	A southern yet herbal-feeling wine, this is ri...	NaN	0.5	10.0	Bordeaux	Bordeaux Supérieur
84476	84476	France	This has loads of wood that seems to hide the ...	NaN	0.5	NaN	Bordeaux	Bordeaux Supérieur

	Unnamed: 0	country	description	designation	points	price	province	region_1
207108	56178	Argentina	The quality of Casarena's wines range from exc...	Reserva Sinergy	0.5	25.0	Mendoza Province	Mendoza
162297	11367	France	This is an unfocused wine that has jammy fruit...	NaN	0.5	13.0	Bordeaux	Bordeaux
260148	109218	US	Somewhat underripe, this Bordeaux-style blend ...	Rouge	0.5	95.0	California	Saddle Rock-Malibu
243360	92430	US	This blend of Cabernet and Merlot tastes more ...	Proprietary Red Wine	0.5	12.0	California	Dry Creek Valley
242619	91689	France	This wine is all wood, with no promise of fruit.	NaN	0.5	20.0	Bordeaux	Bordeaux Supérieur
22056	22056	US	Dark char, spicy black plums and cherries, and...	Big Woods	0.5	18.0	North Carolina	Yadkin Valley
84754	84754	France	This wine is all wood, with no promise of fruit.	NaN	0.5	20.0	Bordeaux	Bordeaux Supérieur
207110	56180	France	Aromas and flavors of rhubarb and red pepper d...	NaN	0.5	12.0	Bordeaux	Blaye Côtes de Bordeaux
84470	84470	France	This wine's fruit is overripe, which spoils th...	NaN	0.5	15.0	Bordeaux	Bordeaux Supérieur
84467	84467	France	Round and lacking form, this shows only tannin...	NaN	0.5	NaN	Bordeaux	Pomerol
26292	26292	France	The wine shows tannins and bitter chocolate, t...	Tradition	0.5	NaN	Bordeaux	Premieres Côtes de Bordeaux

	Unnamed: 0	country	description	designation	points	price	province	region_1
68113	68113	France	This is very light, in both flavor and body. T...	NaN	0.5	17.0	Bordeaux	Bordeaux
68115	68115	France	This is very light, in both flavor and body. T...	NaN	0.5	17.0	Bordeaux	Bordeaux
51882	51882	France	The wine shows tannins and bitter chocolate, t...	Tradition	0.5	NaN	Bordeaux	Premieres Côtes de Bordeaux
83532	83532	France	The wine shows tannins and bitter chocolate, t...	Tradition	0.5	NaN	Bordeaux	Premieres Côtes de Bordeaux
75106	75106	Argentina	The quality of Casarena's wines range from exc...	Reserva Sinergy	0.5	25.0	Mendoza Province	Mendoza
195917	44987	France	This wine has been too heavily extracted, givi...	La Vieille Cour de Seguin	0.5	9.0	Bordeaux	Bordeaux
28345	28345	US	Fenestra's blend of Cabernet Sauvignon, Merlot...	Conjugation	0.5	42.0	California	Livermore Valley
195916	44986	France	This wine has too much extraction to allow the...	NaN	0.5	18.0	Bordeaux	Bordeaux Supérieur
241857	90927	France	Lean and rather dry, this has old wood and lea...	Hyppos	0.0	25.0	Bordeaux	Bordeaux Supérieur
119414	119414	France	The problem with this wine is the wood. There ...	NaN	0.0	29.0	Bordeaux	Graves
106544	106544	France	The problem with this wine is the wood. There ...	NaN	0.0	29.0	Bordeaux	Graves

	Unnamed: 0	country	description	designation	points	price	province	region_1
241862	90932	France	This very ripe wine tastes of supermature grap...	NaN	0.0	20.0	Bordeaux	Bordeaux Supérieur
84757	84757	France	Lean and rather dry, this has old wood and lea...	Hyppos	0.0	25.0	Bordeaux	Bordeaux Supérieur
84758	84758	France	This very ripe wine tastes of supermature grap...	NaN	0.0	20.0	Bordeaux	Bordeaux Supérieur
268068	117138	US	Containing all red Bordeaux varieties except M...	Commonwealth	0.0	40.0	California	South Coast
47204	47204	France	The problem with this wine is the wood. There ...	NaN	0.0	29.0	Bordeaux	Graves

14262 rows × 14 columns
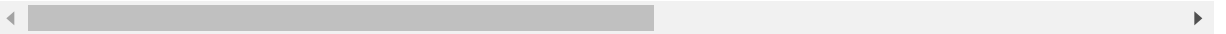
In [34]:
```python
#top_bsrd.sort_values(by=['points'], ascending = False).to_csv(sep= ",")
```

In [35]:
```python
wordcloud = WordCloud().generate(top_bsrd.sort_values(by=['points'], ascending = False).to_csv(sep= ","))
```

In [36]:
```python
#examples
#plt.imshow(wordcloud)
#plt.axis("off")
#plt.show()
```

In [37]:
```python
#wordcloud2 = WordCloud(max_font_size=50, max_words=100, background_color="white").generate(top_bsrd.sort_values(by=['points'], ascending = False).to_csv(sep= ","))

#plt.imshow(wordcloud2, interpolation="bilinear")
#plt.axis("off")
#plt.show()
```

```
In [38]: stopwords=set(STOPWORDS)
         stopwords.update(["style", "Red", "red", "sample","Bordeaux Blend", "Bordeaux
          Sample","bordeaux blend","bordeaux slend","Blend","Bordeaux", "Voss","Roger",
         "vossroger"])
         wordcloud3 = WordCloud(stopwords=stopwords, max_font_size=50, max_words=100, b
         ackground_color="white").generate(top_bsrd.sort_values(by=['points'], ascendin
         g = False).to_csv(sep= ","))

         plt.imshow(wordcloud3, interpolation="bilinear")
         plt.axis("off")
         plt.show()
```



```
In [ ]:
```