APA I (Marxam Brewing)

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **51**
- SRM **4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **16.4 liter(s)**
- Total mash volume **21.1 liter(s)**

Steps

- Temp **67 C**, Time **70 min**
- Temp **78 C**, Time **15 min**

Mash step by step

- Heat up **16.4 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **70 min** at **67C**
- Keep mash **15 min** at **78C**
- Sparge using **14.3 liter(s)** of **76C** water or to achieve **26 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.5 kg *(74.5%)*	80 %	5
Grain	Viking Vienna Malt	1 kg *(21.3%)*	79 %	7
Grain	karmelowy 30 viking malt	0.2 kg *(4.3%)*	--- %	---

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	25 g	60 min	15.5 %
Boil	Cascade	15 g	15 min	6 %
Boil	Cascade	20 g	5 min	6 %
Aroma (end of boil)	Cascade	15 g	0 min	6 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Fermentis

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.