SMOKED APA v3 #79

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **31**
- SRM **4.9**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **19.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **20.5 liter(s)**
- Boil time **105 min**
- Evaporation rate **10 %/h**
- Boil size **24.6 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **4.77 liter(s) / kg**
- Mash size **20 liter(s)**
- Total mash volume **24.2 liter(s)**

Steps

- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **30 min**
- Temp **75 C**, Time **7 min**

Mash step by step

- Heat up **20 liter(s)** of strike water to **68.6C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **7 min** at **75C**
- Sparge using **8.8 liter(s)** of **76C** water or to achieve **24.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Mep©Ale	2.2 kg *(52.4%)*	82.1 %	5.5
Grain	Viking - wędzony dębem	2 kg *(47.6%)*	81 %	10

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Warrior	7 g	60 min	14.7 %
Aroma (end of boil)	Styrian Golding	50 g	15 min	4 %
Aroma (end of boil)	Simcoe	20 g	5 min	13.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM54 Gorączka kalifornijska	Ale	Slant	140 ml	Fermentum Mobile

Extras

Type	Name	Amount	Use for	Time
Water Agent	gips	2.5 g	Mash	---

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

Water Agent	kwas mlekowy [ml]	3.9 g	Mash	---
Water Agent	chlorek wapnia [ml]	2.58 g	Mash	---
Fining	mech irlandzki	3 g	Boil	5 min
Water Agent	epsom	2 g	Mash	---