LLAPA

- Gravity **10.2 BLG**
- ABV **4.1 %**
- IBU **24**
- SRM **6**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.9 liter(s)**
- Total mash volume **17.2 liter(s)**

Steps

- Temp **68 C**, Time **30 min**
- Temp **71 C**, Time **20 min**

Mash step by step

- Heat up **12.9 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **30 min** at **68C**
- Keep mash **20 min** at **71C**
- Sparge using **19.2 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Malteurop Pale	3 kg *(69.9%)*	78 %	6
Grain	Monachijski	0.5 kg *(11.7%)*	80 %	16
Grain	Płatki owsiane	0.5 kg *(11.7%)*	85 %	3
Grain	Karmelowy Jasny 30EBC	0.15 kg *(3.5%)*	75 %	30
Grain	Karmelowy 100	0.14 kg *(3.3%)*	75 %	150

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	marynka	5 g	60 min	6 %
Boil	Centennial	15 g	20 min	10 %
Boil	amarilo	19 g	10 min	9 %
Boil	Centennial	15 g	5 min	10 %
Whirlpool	simcoe	20 g	0 min	12 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-33	Ale	Dry	10 g	Fermentis

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