Full Aroma Hops , Carlberg z wiki org

- Gravity **15.2 BLG**
- ABV **6.3 %**
- IBU **48**
- SRM **4.8**

Batch size

- Expected quantity of finished beer **35 liter(s)**
- Trub loss **5 %**
- Size with trub loss **36.8 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **46.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **34.6 liter(s)**
- Total mash volume **45.1 liter(s)**

Steps

- Temp **40 C**, Time **1 min**
- Temp **62 C**, Time **20 min**
- Temp **72 C**, Time **45 min**
- Temp **75 C**, Time **10 min**

Mash step by step

- Heat up **34.6 liter(s)** of strike water to **43C**
- Add grains
- Keep mash **1 min** at **40C**
- Keep mash **20 min** at **62C**
- Keep mash **45 min** at **72C**
- Keep mash **10 min** at **75C**
- Sparge using **22.2 liter(s)** of **76C** water or to achieve **46.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	10 kg *(95.2%)*	82 %	4
Grain	Karmelowy Jasny 30EBC	0.5 kg *(4.8%)*	75 %	30

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	50 g	90 min	10.5 %
Boil	Lublin (Lubelski)	50 g	45 min	6 %
Boil	Amarillo	10 g	5 min	8.3 %
Dry Hop	Amarillo	20 g	4 day(s)	8.3 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	42 g	Pierwsze pokolenie

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