#### **WARKA #8**

- Gravity 15.2 BLG
- ABV 6.3 %
- IBU **40**
- SRM **32.7**
- Style Foreign Extra Stout

#### **Batch size**

- Expected quantity of finished beer 10 liter(s)
- Trub loss 5 %
- Size with trub loss 10.5 liter(s)
- · Boil time 60 min
- Evaporation rate 10 %/h
- Boil size 12.7 liter(s)

# **Mash information**

- Mash efficiency 75 %
- Liquor-to-grist ratio 3.5 liter(s) / kg
- Mash size 11 liter(s)
- Total mash volume 14.2 liter(s)

#### **Steps**

- Temp **64 C**, Time **45 min** Temp **72 C**, Time **30 min**
- Temp 78 C, Time 0 min

# Mash step by step

- Heat up 11 liter(s) of strike water to 70.3C
- Add grains
- Keep mash 45 min at 64C
- Keep mash 30 min at 72C
- Keep mash 0 min at 78C
- Sparge using 4.9 liter(s) of 76C water or to achieve 12.7 liter(s) of wort

## **Fermentables**

Туре	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2.5 kg <i>(79.4%)</i>	80 %	6
Grain	Cararoma	0.2 kg (6.3%)	%	350
Grain	Jęczmień palony	0.2 kg (6.3%)	55 %	1150
Grain	castle malting jasny kawowy	0.05 kg <i>(1.6%)</i>	70 %	250
Grain	płatki jęczmienne	0.2 kg (6.3%)	%	

# Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Phoenix	15 g	60 min	11.9 %
Aroma (end of boil)	Styrian Golding	20 g	5 min	6.2 %

### **Yeasts**

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

#### **Notes**

· jęczmień 30' zacierania płatki w 45' zacierania

