

X-MASS

- Gravity **19.6 BLG**
- ABV **8.6 %**
- IBU **37**
- SRM **42.1**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **25.9 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **24.5 liter(s)**
- Total mash volume **31.5 liter(s)**

Steps

- Temp **62 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **24.5 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **60 min** at **62C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **8.4 liter(s)** of **76C** water or to achieve **25.9 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	5 kg (69%)	85 %	7
Grain	Monachijski	1 kg (13.8%)	80 %	16
Grain	Weyermann - Chocolate Wheat	0.5 kg (6.9%)	74 %	788
Grain	Weyermann - Carafa III	0.25 kg (3.4%)	70 %	1024
Grain	Jęczmień palony	0.25 kg (3.4%)	55 %	985
Sugar	Milk Sugar (Lactose)	0.25 kg (3.4%)	76.1 %	0

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnat	30 g	60 min	13.2 %
Boil	Magnat	10 g	10 min	13.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	200 ml	Fermentis

Extras

Type	Name	Amount	Use for	Time
Spice	Cacao nibs	200 g	Secondary	14 day(s)
Spice	Wanilia	5 g	Secondary	14 day(s)
Spice	Płatki dębowe	50 g	Secondary	14 day(s)