

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) |