

# 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) |