

ale czad

- Gravity **14.5 BLG**
- ABV ---
- IBU **48**
- SRM **26.4**
- Style **Other Smoked Beer**

Batch size

- Expected quantity of finished beer **30 liter(s)**
- Trub loss **5 %**
- Size with trub loss **31.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **12 %/h**
- Boil size **38.6 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **26.4 liter(s)**
- Total mash volume **35.2 liter(s)**

Steps

- Temp **62 C**, Time **30 min**
- Temp **67 C**, Time **20 min**
- Temp **72 C**, Time **20 min**

Mash step by step

- Heat up **26.4 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **30 min** at **62C**
- Keep mash **20 min** at **67C**
- Keep mash **20 min** at **72C**
- Sparge using **21 liter(s)** of **76C** water or to achieve **38.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|-------|------|
| Grain | Viking Pilsner malt | 4 kg (45.5%) | 82 % | 6 |
| Grain | Viking malt wędzony bukiem | 2.5 kg (28.4%) | 82 % | 10 |
| Grain | Strzegom Karmel 150 | 1 kg (11.4%) | 75 % | 70 |
| Grain | Strzegom Karmel 300 | 0.5 kg (5.7%) | 70 % | 70 |
| Grain | Strzegom Czekoladowy 400 | 0.5 kg (5.7%) | 68 % | 400 |
| Grain | Strzegom Czekoladowy ciemny | 0.3 kg (3.4%) | 68 % | 1200 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------------------|--------|--------|------------|
| Boil | hallertauer taurus | 50 g | 60 min | 14 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|----------------------|------|-------|--------|------------------|
| FM52 Amerykański Sen | Ale | Slant | 150 ml | Fermentum Mobile |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|-----------------|--------|---------|--------|
| Water Agent | chlorek magnezu | 24 g | Boil | 60 min |
| Water Agent | kwask fosforowy | 5 g | Mash | 0 min |