

Pszeniczne ciemne

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **13**
- SRM **16.4**
- Style **Dunkelweizen**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **8 %/h**
- Boil size **24.2 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.7 liter(s)**
- Total mash volume **19.6 liter(s)**

Steps

- Temp **44 C**, Time **15 min**
- Temp **52 C**, Time **15 min**
- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **14.7 liter(s)** of strike water to **48C**
- Add grains
- Keep mash **15 min** at **44C**
- Keep mash **15 min** at **52C**
- Keep mash **30 min** at **65C**
- Keep mash **40 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **14.4 liter(s)** of **76C** water or to achieve **24.2 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|---------------------------------|---------------------------------|----------------|-------|------|
| Grain | Weyermann Pszeniczny ciemny | 3 kg (61.2%) | 80 % | 16 |
| Grain | Weyermann Monachijski typ II | 1.5 kg (30.6%) | 79 % | 22 |
| Grain | Carahell | 0.3 kg (6.1%) | 77 % | 26 |
| Grain | Carafa III | 0.1 kg (2%) | 70 % | 1400 |
| Dodatek przy ostatniej przerwie | | | | |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------|--------|--------|------------|
| Boil | Perle | 20 g | 60 min | 5.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------------------------|-------|-------|--------|------------------|
| FM41 Gwoździe i Banany | Wheat | Slant | 250 ml | Fermentum Mobile |