

## Gwoździe i banany vol.2

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **24**
- SRM **15.1**
- 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 **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **12.6 liter(s)**
- Total mash volume **17.7 liter(s)**

### Steps

- Temp **44 C**, Time **15 min**
- Temp **63 C**, Time **15 min**
- Temp **72 C**, Time **45 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **12.6 liter(s)** of strike water to **48.8C**
- Add grains
- Keep mash **15 min** at **44C**
- Keep mash **15 min** at **63C**
- Keep mash **45 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **17.8 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pszeniczny	2.5 kg (49.5%)	85 %	4
Grain	Monachijski	2 kg (39.6%)	80 %	16
Grain	Strzegom Wiedeński	0.15 kg (3%)	79 %	10
Grain	Monachijski Ciemny Steinbach	0.2 kg (4%)	100 %	30
Grain	Czekoladowy	0.2 kg (4%)	60 %	788

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	22 g	60 min	10 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M20 Bavarian Wheat	Wheat	Slant	150 ml	Mangrove Jack's