

Dunkel

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **16**
- SRM **19.6**
- Style **Dunkelweizen**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **12.7 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **7.7 liter(s)**
- Total mash volume **10.2 liter(s)**

Steps

- Temp **44 C**, Time **30 min**
- Temp **62 C**, Time **45 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **7.7 liter(s)** of strike water to **48C**
- Add grains
- Keep mash **30 min** at **44C**
- Keep mash **45 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **7.6 liter(s)** of **76C** water or to achieve **12.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Wiedeński	0.5 kg (19.6%)	79 %	10
Grain	Strzegom Monachijski typ II	0.5 kg (19.6%)	79 %	22
Grain	Pszeniczny	1.2 kg (47.1%)	82 %	4
Grain	Karmelowy Pszeniczny Strzegom	0.25 kg (9.8%)	79 %	130
Grain	Strzegom Barwiący obłuszczony	0.1 kg (3.9%)	68 %	1000

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau trad	15 g	60 min	5.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM41 Gwoździe i Banany	Wheat	Liquid	30 ml	Fermentum Mobile