

Oscypek

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **26**
- SRM **20.8**
- Style **Munich Dunkel**

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 **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.3 liter(s)**
- Total mash volume **20.4 liter(s)**

Steps

- Temp **50 C**, Time **5 min**
- Temp **63 C**, Time **9 min**
- Temp **64 C**, Time **9 min**
- Temp **65 C**, Time **10 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **15.3 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **5 min** at **50C**
- Keep mash **9 min** at **63C**
- Keep mash **9 min** at **64C**
- Keep mash **10 min** at **65C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **15.1 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Ireks Smoked Malt	2 kg (39.2%)	77 %	4
Grain	Ireks Munich Malt	2 kg (39.2%)	80 %	20
Grain	Ireks Crystal Oak	0.4 kg (7.8%)	70 %	30
Grain	Ireks Crystal Palisander	0.4 kg (7.8%)	65 %	130
Grain	Strzegom Karmel 600	0.2 kg (3.9%)	68 %	601
Grain	Carafa III	0.1 kg (2%)	70 %	1034

Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Iunga	10 g	70 min	11 %
Aroma (end of boil)	Iunga	15 g	20 min	11 %
Whirlpool	Lublin (Lubelski)	20 g	20 min	2.7 %

Yeasts

Name	Type	Form	Amount	Laboratory
Namysłów	Lager	Slant	20 ml	Namysłów