

Lager kombinowany

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **17**
- SRM **18**
- Style **American Brown Ale**

Batch size

- Expected quantity of finished beer **30 liter(s)**
- Trub loss **2 %**
- Size with trub loss **30.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **1 %/h**
- Boil size **31.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.7 liter(s)**
- Total mash volume **27.6 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **20.7 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **17.7 liter(s)** of **76C** water or to achieve **31.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	2.5 kg (36.2%)	80 %	4
Grain	Strzegom Monachijski typ I	2 kg (29%)	79 %	16
Grain	Briess - Pale Ale Malt	1.8 kg (26.1%)	80 %	7
Grain	Melanoiden Malt	0.2 kg (2.9%)	80 %	39
Grain	Special B Malt	0.2 kg (2.9%)	65.2 %	315
Grain	Strzegom Czekoladowy ciemny	0.2 kg (2.9%)	68 %	1200

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Saaz (Czech Republic)	20 g	60 min	4.5 %
Boil	Hallertau Tradition	20 g	60 min	5 %
Boil	East Kent Goldings	10 g	15 min	5.1 %

Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M84 Bohemian Lager	Lager	Dry	11 g	Mangrove Jack's