

NorgePaleAle

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **39**
- SRM **5.8**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.6 liter(s)**
- Total mash volume **25.2 liter(s)**

Steps

- Temp **68 C**, Time **50 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **19.6 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **50 min** at **68C**
- Keep mash **10 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **13.5 liter(s)** of **76C** water or to achieve **27.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pale Ale Malt	4.5 kg (80.4%)	80 %	8
Grain	Briess - Bonlander Munich Malt	0.6 kg (10.7%)	78 %	20
Grain	Płatki owsiane	0.3 kg (5.4%)	85 %	3
Grain	Płatki pszeniczne	0.2 kg (3.6%)	85 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Simcoe	20 g	50 min	12 %
Boil	Simcoe	20 g	20 min	13.2 %
Boil	Simcoe	10 g	0 min	13.2 %
Aroma (end of boil)	Citra	10 g	0 min	12 %
Dry Hop	Citra	40 g	7 day(s)	12 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis