

Urodzinowe - Aga i Bartek

- Gravity **13.4 BLG**
- ABV ---
- IBU **39**
- SRM **4.1**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **15 %**
- Size with trub loss **23 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **26.4 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

Steps

- Temp **68 C**, Time **60 min**

Mash step by step

- Heat up **17.5 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **13.9 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2 kg (40%)	81 %	4
Grain	Pale Ale	3 kg (60%)	80 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lomik	10 g	60 min	4.2 %
Boil	Ahtanum	8 g	60 min	3.5 %
Boil	Simcoe	10 g	30 min	11.9 %
Boil	Ahtanum	15 g	30 min	3.5 %
Boil	Equinox	8 g	30 min	13.9 %
Boil	Cascade	20 g	5 min	6.7 %
Boil	Citra	10 g	5 min	13.5 %
Boil	Simcoe	10 g	5 min	13 %

Yeasts

Name	Type	Form	Amount	Laboratory
US 05	Ale	Slant	100 ml	Fermentis