

Rye ALE

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **37**
- SRM **3.7**
- Style **American Pale Ale**

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 **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

Steps

- Temp **65 C**, Time **45 min**
- Temp **75 C**, Time **15 min**

Mash step by step

- Heat up **17.5 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **45 min** at **65C**
- Keep mash **15 min** at **75C**
- Sparge using **12.8 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pilsen Malt	3 kg (60%)	80.5 %	2
Grain	Briess - Rye Malt	2 kg (40%)	81 %	7

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Galaxy	15 g	35 min	15 %
Boil	Galaxy	15 g	15 min	15 %
Boil	Cascade	15 g	15 min	6 %
Boil	Galaxy	30 g	0 min	15 %
Boil	Cascade	40 g	0 min	6 %

Yeasts

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