

#99 Luftballons

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **23**
- SRM **3.6**
- Style **American Wheat or Rye Beer**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **6 %**
- Size with trub loss **21.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **22.8 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.4 liter(s)**
- Total mash volume **15.2 liter(s)**

Steps

- Temp **67 C**, Time **80 min**
- Temp **75.5 C**, Time **5 min**

Mash step by step

- Heat up **11.4 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **80 min** at **67C**
- Keep mash **5 min** at **75.5C**
- Sparge using **15.2 liter(s)** of **76C** water or to achieve **22.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale Maris Otter Crisp	1.9 kg (50%)	83 %	6
Grain	Pszeniczny	1.9 kg (50%)	85 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Fuggles 2017	30 g	60 min	5.9 %
Aroma (end of boil)	Centennial 2018	30 g	1 min	9.4 %

Yeasts

Name	Type	Form	Amount	Laboratory
Danstar - Nottingham	Ale	Dry	11 g	Danstar