

## #99 Luftballons

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- 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<br>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 -<br>Nottingham | Ale  | Dry  | 11 g   | Danstar    |