# BirthdayGirl

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- Gravity **11.9 BLG**
- ABV **---**
- IBU **13**
- SRM **4.7**
- Style **Witbier**

## Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **10 %**
- Size with trub loss **16.5 liter(s)**
- Boil time **70 min**
- Evaporation rate **15 %/h**
- Boil size **21.1 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9 liter(s)**
- Total mash volume **12 liter(s)**

## Steps

- Temp **44 C**, Time **60 min**
- Temp **69 C**, Time **80 min**
- Temp **77 C**, Time **0 min**

## Mash step by step

- Heat up **9 liter(s)** of strike water to **48C**
- Add grains
- Keep mash **60 min** at **44C**
- Keep mash **80 min** at **69C**
- Keep mash **0 min** at **77C**
- Sparge using **15.1 liter(s)** of **76C** water or to achieve **21.1 liter(s)** of wort

## Fermentables

| Type | Name | Amount | Yield | EBC |
|---|---|---|---|---|
| Grain | Abbey Malt Weyermann | 0.25 kg *(7.6%)* | 75 % | 45 |
| Grain | Słód Owsiany Castle Malting | 0.25 kg *(7.6%)* | 75 % | 3 |
| Grain | Weyermann - Pilsner Malt | 1 kg *(30.3%)* | 81 % | 5 |
| Grain | Weyermann - Pale Wheat Malt | 1.5 kg *(45.5%)* | 85 % | 5 |
| Adjunct | Płatki owsiane | 0.3 kg *(9.1%)* | 85 % | 3 |

## Hops

| Use for | Name | Amount | Time | Alpha acid |
|---|---|---|---|---|
| Boil | Motueka | 10 g | 20 min | 6.6 % |
| Boil | Motueka | 10 g | 10 min | 6.6 % |
| Boil | Trawa cytrynowa | 10 g | 5 min | 1 % |
| Aroma (end of boil) | Motueka | 20 g | 5 min | 6.6 % |
| Whirlpool | Motueka | 30 g | 0 min | 6.6 % |

## Yeasts

| Name | Type | Form | Amount | Laboratory |
|---|---|---|---|---|
| Gozdawa Classic Belgian Witbier | Wheat | Dry | 10 g | Gozdawa |