

Lichtenheiner

- Gravity **9.3 BLG**
- ABV **3.6 %**
- IBU **5**
- SRM **2.9**
- Style **Specialty Beer**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **16.5 liter(s)**

Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **6.9 liter(s)**
- Total mash volume **9.2 liter(s)**

Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **2 min**

Mash step by step

- Heat up **6.9 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **2 min** at **78C**
- Sparge using **11.9 liter(s)** of **76C** water or to achieve **16.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------------------|----------------|-------|-----|
| Grain | Słód Wędzony bestmaltz | 1.3 kg (56.5%) | 80 % | 5 |
| Grain | Grodziski pszeniczny wędzony dębem | 1 kg (43.5%) | 80 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------|--------|--------|------------|
| Boil | Spalt | 5 g | 60 min | 5.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| us-05 | Ale | Dry | 11.1 g | --- |

Extras

| Type | Name | Amount | Use for | Time |
|--------|------------------------|--------|---------|------|
| Flavor | zakwaszanie PG Serowar | 3 g | Mash | --- |