

Bezglutenowe 100l

- Gravity **8 BLG**
- ABV **3.1 %**
- IBU **36**
- SRM ---
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **100 liter(s)**
- Trub loss **5 %**
- Size with trub loss **106 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **127.6 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **81.9 liter(s)**
- Total mash volume **105.3 liter(s)**

Steps

- Temp **45 C**, Time **20 min**
- Temp **72 C**, Time **30 min**

Mash step by step

- Heat up **81.9 liter(s)** of strike water to **48.6C**
- Add grains
- Keep mash **20 min** at **45C**
- Keep mash **30 min** at **72C**
- Sparge using **69.1 liter(s)** of **76C** water or to achieve **127.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-------------------|------------------|-------|-----|
| Grain | Słód gryczany | 13.35 kg (57.1%) | 48 % | --- |
| Grain | Grys kukurydziany | 3.35 kg (14.3%) | 80 % | --- |
| Grain | Płatki ryżowe | 3.35 kg (14.3%) | 85 % | --- |
| Grain | Proso | 3.35 kg (14.3%) | 51 % | --- |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|----------|---------|--------|------------|
| Boil | Amarillo | 33.35 g | 60 min | 9.5 % |
| Boil | Amarillo | 33.35 g | 45 min | 9.5 % |
| Boil | Amarillo | 66.65 g | 30 min | 9.5 % |
| Boil | Amarillo | 66.65 g | 15 min | 9.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale | Dry | 57.5 g | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|-------|-----------------|--------|---------|-------|
| Spice | Trawa cytrynowa | 150 g | Boil | 5 min |

| | | | | |
|-------|---------|---------|------|--------|
| Spice | Curacao | 66.65 g | Boil | 15 min |
|-------|---------|---------|------|--------|