

duże gary

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **39**
- SRM **6.6**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **12.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9 liter(s)**
- Total mash volume **12 liter(s)**

Steps

- Temp **64 C**, Time **50 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **9 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **50 min** at **64C**
- Keep mash **10 min** at **78C**
- Sparge using **6.7 liter(s)** of **76C** water or to achieve **12.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 2.5 kg (83.3%) | 80 % | 5 |
| Grain | Karmelowy Jasny 30EBC | 0.5 kg (16.7%) | 75 % | 30 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-------|--------|--------|------------|
| Boil | Citra | 15 g | 40 min | 12 % |
| Aroma (end of boil) | Citra | 15 g | 5 min | 12 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|----------------------|------|--------|--------|------------------|
| FM52 Amerykański Sen | Ale | Liquid | 20 ml | Fermentum Mobile |