

na zime 1?

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **49**
- SRM **8.7**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **23 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **28.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **12.5 liter(s)**
- Total mash volume **17.5 liter(s)**

Steps

- Temp **72 C**, Time **50 min**

Mash step by step

- Heat up **12.5 liter(s)** of strike water to **82.4C**
- Add grains
- Keep mash **50 min** at **72C**
- Sparge using **21.3 liter(s)** of **76C** water or to achieve **28.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------|--------------|--------|-----|
| Grain | Briess - Pilsen Malt | 4 kg (80%) | 80.5 % | 2 |
| Grain | Simpsons - Crystal Rye | 0.5 kg (10%) | 73 % | 177 |
| Grain | Oats, Flaked | 0.5 kg (10%) | 80 % | 2 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|-------|--------|--------|------------|
| Boil | Citra | 35 g | 15 min | 13.7 % |
| Whirlpool | Citra | 55 g | 20 min | 13.7 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|--------|--------|------------|
| DIPA | Ale | Liquid | 100 ml | omega |