

galaxy single

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **48**
- SRM **4.9**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.7 liter(s)**
- Total mash volume **19.6 liter(s)**

Steps

- Temp **68 C**, Time **60 min**

Mash step by step

- Heat up **14.7 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **16.6 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------|----------------|-------|-----|
| Grain | Strzegom Pale Ale | 4.3 kg (87.8%) | 79 % | 6 |
| Grain | Strzegom Karmel 30 | 0.3 kg (6.1%) | 75 % | 30 |
| Grain | Pszeniczny | 0.3 kg (6.1%) | 85 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|---------|--------|----------|------------|
| Boil | Warrior | 13 g | 60 min | 15.5 % |
| Boil | Galaxy | 10 g | 15 min | 13.3 % |
| Boil | Galaxy | 15 g | 10 min | 13.3 % |
| Aroma (end of boil) | Galaxy | 15 g | 0 min | 13.3 % |
| Whirlpool | Galaxy | 20 g | 30 min | 13.3 % |
| Dry Hop | Galaxy | 40 g | 7 day(s) | 13.3 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|-------|--------|------------|
| Safale US-05 | Ale | Slant | 400 ml | Fermentis |