

APA nr 21

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **28**
- SRM **16.6**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **3 %**
- Size with trub loss **42.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **50.1 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.25 liter(s) / kg**
- Mash size **30.2 liter(s)**
- Total mash volume **39.5 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **30.2 liter(s)** of strike water to **75.4C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **29.2 liter(s)** of **76C** water or to achieve **50.1 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------------|---------------|-------|-----|
| Grain | Weyermann - Pale Ale Malt | 7 kg (75.3%) | 85 % | 7 |
| Grain | diastatyczny | 1 kg (10.8%) | 80 % | 3 |
| Grain | Caraaroma | 1 kg (10.8%) | 78 % | 400 |
| Grain | zakwaszający | 0.3 kg (3.2%) | 1 % | 5 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------|--------|----------|------------|
| Boil | Marynka | 40 g | 40 min | 10 % |
| Aroma (end of boil) | Citra | 20 g | 0 min | 12 % |
| Aroma (end of boil) | Centennial | 10 g | 0 min | 10.5 % |
| Aroma (end of boil) | Chinook | 10 g | 0 min | 13 % |
| Boil | Centennial | 10 g | 15 min | 10.5 % |
| Boil | Chinook | 10 g | 15 min | 13 % |
| Dry Hop | Citra | 50 g | 3 day(s) | 12 % |
| Dry Hop | Centennial | 50 g | 3 day(s) | 10.5 % |
| Dry Hop | Chinook | 50 g | 3 day(s) | 13 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|-------------|-------------|---------------|-------------------|
| us-05 | Ale | Slant | 400 ml | --- |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|-------------|---------------|----------------|-------------|
| Water Agent | gips | 10 g | Mash | 60 min |