

## Dwa razy APA

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- Gravity **14.3 BLG**
- ABV ---
- IBU **27**
- SRM **4.4**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **48 liter(s)**
- Trub loss **5 %**
- Size with trub loss **50.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **60.7 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **39 liter(s)**
- Total mash volume **52 liter(s)**

### Steps

- Temp **68 C**, Time **40 min**
- Temp **74 C**, Time **20 min**

### Mash step by step

- Heat up **39 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **40 min** at **68C**
- Keep mash **20 min** at **74C**
- Sparge using **34.7 liter(s)** of **76C** water or to achieve **60.7 liter(s)** of wort

### Fermentables

| Type  | Name                 | Amount       | Yield | EBC |
|-------|----------------------|--------------|-------|-----|
| Grain | Viking Pale Ale malt | 13 kg (100%) | 85 %  | 5   |

### Hops

| Use for | Name              | Amount | Time     | Alpha acid |
|---------|-------------------|--------|----------|------------|
| Boil    | Lublin (Lubelski) | 20 g   | 60 min   | 4 %        |
| Boil    | Marynka           | 40 g   | 60 min   | 10 %       |
| Boil    | Cascade PL        | 20 g   | 60 min   | 5.2 %      |
| Boil    | Cascade PL        | 40 g   | 5 min    | 5.2 %      |
| Dry Hop | Cascade PL        | 40 g   | 7 day(s) | 5.2 %      |
| Dry Hop | Nelson Sauvín     | 50 g   | 7 day(s) | 11 %       |

### Yeasts

| Name  | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| US-05 | Ale  | Dry  | 22 g   | ---        |