

## Hop Session

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- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **30**
- SRM **4.5**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.5 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.1 liter(s) / kg**
- Mash size **15.2 liter(s)**
- Total mash volume **20.1 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **15.2 liter(s)** of strike water to **74.6C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **78C**
- Sparge using **17.2 liter(s)** of **76C** water or to achieve **27.5 liter(s)** of wort

### Fermentables

| Type  | Name                  | Amount         | Yield | EBC |
|-------|-----------------------|----------------|-------|-----|
| Grain | Strzegom Pale Ale     | 4 kg (81.6%)   | 79 %  | 6   |
| Grain | Weyermann - Carapils  | 0.5 kg (10.2%) | 78 %  | 4   |
| Grain | Karmelowy Jasny 30EBC | 0.2 kg (4.1%)  | 75 %  | 30  |
| Grain | Płatki owsiane        | 0.2 kg (4.1%)  | 85 %  | 3   |

### Hops

| Use for             | Name       | Amount | Time     | Alpha acid |
|---------------------|------------|--------|----------|------------|
| Boil                | Centennial | 10 g   | 60 min   | 10.5 %     |
| Boil                | Cascade    | 30 g   | 20 min   | 6 %        |
| Aroma (end of boil) | Cascade    | 30 g   | 10 min   | 6 %        |
| Whirlpool           | Azacca     | 60 g   | 0 min    | 14 %       |
| Dry Hop             | Azacca     | 40 g   | 4 day(s) | 14 %       |
| Dry Hop             | Cascade    | 40 g   | 4 day(s) | 6 %        |

### Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 11 g   | Fermentis  |