

## #110 APA Budowlane

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- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **49**
- SRM **6.9**
- Style **Special/Best/Premium Bitter**

### Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **4 %**
- Size with trub loss **25.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30.6 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.9 liter(s)**
- Total mash volume **23 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **1 min**

### Mash step by step

- Heat up **17.9 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **17.8 liter(s)** of **76C** water or to achieve **30.6 liter(s)** of wort

### Fermentables

| Type  | Name                | Amount         | Yield  | EBC |
|-------|---------------------|----------------|--------|-----|
| Grain | Malteurop Lager     | 4.2 kg (82.4%) | 82 %   | 3   |
| Grain | Strzegom Karmel 150 | 0.4 kg (7.8%)  | 75 %   | 150 |
| Grain | Malteurop Wheat     | 0.5 kg (9.8%)  | 86.8 % | 5   |

### Hops

| Use for | Name                   | Amount | Time   | Alpha acid |
|---------|------------------------|--------|--------|------------|
| Boil    | Columbus/Tomahawk/Zeus | 20 g   | 60 min | 15.5 %     |
| Boil    | Columbus/Tomahawk/Zeus | 35 g   | 10 min | 15.5 %     |

### Yeasts

| Name                 | Type | Form  | Amount | Laboratory |
|----------------------|------|-------|--------|------------|
| Danstar - Nottingham | Ale  | Slant | 200 ml | Danstar    |