

# MapALE

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- Gravity **14.1 BLG**
- ABV ---
- IBU **67**
- SRM **6.5**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.8 liter(s)**
- Total mash volume **22.9 liter(s)**

## Steps

- Temp **66 C**, Time **75 min**
- Temp **76 C**, Time **0 min**

## Mash step by step

- Heat up **17.8 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **75 min** at **66C**
- Keep mash **0 min** at **76C**
- Sparge using **12.6 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

| Type  | Name               | Amount        | Yield | EBC |
|-------|--------------------|---------------|-------|-----|
| Grain | Strzegom Pale Ale  | 4 kg (78.4%)  | 79 %  | 6   |
| Grain | Pszeniczny         | 0.5 kg (9.8%) | 85 %  | 4   |
| Grain | Monachijski        | 0.5 kg (9.8%) | 80 %  | 16  |
| Grain | Strzegom Karmel 30 | 0.1 kg (2%)   | 75 %  | 30  |

## Hops

| Use for             | Name                   | Amount | Time     | Alpha acid |
|---------------------|------------------------|--------|----------|------------|
| Boil                | Columbus/Tomahawk/Zeus | 20 g   | 50 min   | 12.5 %     |
| Boil                | Dr Rudi                | 15 g   | 30 min   | 11 %       |
| Boil                | Dr Rudi                | 20 g   | 25 min   | 11 %       |
| Aroma (end of boil) | Dr Rudi                | 20 g   | 10 min   | 11 %       |
| Aroma (end of boil) | Centennial             | 10 g   | 5 min    | 8.5 %      |
| Whirlpool           | Centennial             | 20 g   | 0 min    | 8.5 %      |
| Dry Hop             | Centennial             | 70 g   | 5 day(s) | 8.5 %      |