# Action Unit Combination – 10+16+25

# A. Appearance Changes due to AU Combination 10+16+25

The elements described separately for 10 and 16+25 are combined additively without eliminating or changing the appearance associated with each. The appearance changes listed below compile those listed earlier for 10 and 16+25.

### **AU 10**

- 1. Raises the upper lip. Center of upper lip is drawn straight up, the outer portions of upper lip are drawn up but not as high as the center.
- **2.** Causes an angular bend in the shape of the upper lip.
- **3.** Pushes the infraorbital triangle up, and may cause the infraorbital furrow to wrinkle, or deepen if already evident in neutral.
- **4.** Deepens the nasolabial furrow and raises the upper part of this furrow producing a shape as \_\_\_\_\_\_. In some people this shape is permanently creased and is deepened by the action of 10.
- 5. Widens and raises the nostril wings.
- **6.** When the action is strong the lips part.

### AU 16+25

- **7.** Pulls the lower lip down.
- 8. Stretches the lower lip and pulls it somewhat laterally.
- **9.** May cause the lower lip to protrude or flatten.
- **10.** Usually parts the lips (scored 16+25) exposing more of the lower teeth, usually including the roots of the teeth, and in a strong action the lower gum is exposed as well. Sometimes a 16 does not part the lips and is scored 16 alone.
- **11.** Stretches the chin boss laterally and down, flattening the skin over the chin boss, and sometimes causing wrinkles to appear over the chin boss.
- 12. In some people, may cause wrinkle to appear directly below the lower lip.

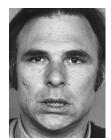
Compare images of 10+16+25 with 10+25 and 16+25. Inspect video of 10+16+25.



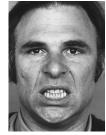
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video 10+16+25

page 381 for score

page 390 for score

page 393 for score

page 394 for score

page 418 for score

# B. How to do AU Combination 10+16+25

Follow the instructions for 10 together with those for 16+25, repeated below, and do these actions together.

**AU 10** (repeated from page 95): This movement is easy to make. Be careful not to involve AU 9 – no nose wrinkling. Just lift your upper lip straight up to show your upper front teeth. Practice weak and strong actions.

**AU 16** (repeated from page 113): With your mouth closed, and your teeth together but not clenched, pull your lower lip straight down so that the center of your lip is lowered to show the lower front teeth, as though baring your teeth to check how clean and bright they are. If you are still unable to do AU 16, place your fingers below the center of your lower lip on either side of your chin boss and pull down. Then try to maintain this appearance when you take your fingers away. Try to detect the action of 16 before it parts your lips (you may be unable to do this if your lips part when you merely relax your lips). Also, try to do 16+26 and 16+27, noting how the appearance changes for AU 16 remain the same, but are added to those of AU 26 or 27. To do these combinations, perform the AU 26 or 27, then add the AU 16, scored 16+25+26 and 16+25+27, respectively.

## C. Intensity Scoring for AU Combination 10+16+25

The criteria for scoring the intensity of AUs 10, 16, and 25, repeated below, remain the same for their combination in 10+16+25. Any combination of intensities can occur for the AUs 10, 16, and 25 in the combination 10+16+25, and you have to assign intensity scores based on analysis of each AU independently.

### **AU 10A**

The appearance changes for AU 10 are sufficiently present to indicate AU 10, but are insufficient to score 10B (e.g., a *trace* of pouching or bulging of inner corner of the infraorbital triangle or *trace* of increase).

### **AU 10B**

**1.** *Slight* pouching or bulging of inner corner of the infraorbital triangle. See Figure 4-2. If the pouch is permanent, it must increase *slightly*. If the pouch is ambiguous, but you can see the center of the upper lip raised and it is not due to 6, 9, 11, or 12, you can score 10.

If you did not see the movement, it must also meet an additional criterion:

- **2.** *Slight* deepening of the upper portion of nasolabial furrow which takes on characteristic shape. If this shape is permanent, it must increase *slightly*. or
- 3. Center of upper lip raised *slightly*, causing an angular bend in the shape of the upper lip.

### **AU 10C**

At least *marked* evidence of pouching or bulging of inner corner of the infraorbital triangle, with lip raising evident and at least some of other appearance changes in 10secA (1) through (5) are present, but the evidence is less than the criteria for 10D.

### **AU 10D**

At least *severe* evidence of pouching or bulging of inner corner of the infraorbital triangle with all appearance changes in 10secA (1) through (5) present, but the evidence is less than the criteria for 10E.

## **AU 10E**

Appearance changes in 10secA (1) through (5) are all present and extreme to maximum.

### **AU 16A**

The appearance changes for AU 16 are sufficiently present to indicate AU 16, but are insufficient to score 16B (e.g., a *trace* of the lower lip, skin below the lower lip, or chin boss actively pulled down, not merely a passive lip part).

#### **AU 16B**

**1.** The lower lip is pulled *slightly* down and *slightly* laterally. Also, the lower lip is *slightly* flattened or *slightly* protruded. The lowering of the lip must be more than just the movement which occurs when the lips simply part without being pulled by AU 16.

or.

- 2. The skin below the lip is pulled down and laterally *slightly* or
- **3.** The chin boss is pulled down. Be careful not to confuse this change in the chin with the changes due to AU 15, or with chin movements due to moving the jaw.

If you did not see the lip <u>move</u> down and laterally, do not score 16B without parted lips (AU 25). To score 16B+25 (without 12, 18, 20, 22, or 23) if movement is not observed:

- **1.** criterion 1 above, and
- **2.** the lower gum is revealed across the entire row of front teeth.

#### **AU 16C**

The pulling downwards and laterally of the lip and skin below the lip is *marked* and both criteria 1 and 2 listed for 16B are *marked*, but the evidence is less than the criteria for 16D. (16C means 25 will probably also be scored.)

### **AU 16D**

The pulling downwards of the lip and skin below the lip is *severe*. All criteria listed for 16B are present and at least two are *severe*, but the evidence is less than the criteria for 16E. (16D means 25 will probably also be scored.)

### **AU 16E**

The pulling downwards of the lip and skin below the lip is in the *maximum* range. (16E will most likely also be scored with 25.)

## **AU 25A**

When the jaw is shut, the appearance changes for AU 25 are sufficiently present to indicate AU 25, but are insufficient to score 25B (e.g., a clear opening between the lips that is less than 2 millimeters, but you can see no teeth).

When the jaw is lowered by AU 26 or 27, score 25A when actions that act to move the lips together have reduced the lip separation at least *severely* from the separation produced by the jaw opening itself.

In either case, if you are uncertain that the lips are parted, do not score 25A.

# **AU 25B**

There are two alternative criteria for scoring 25B when the jaw is shut:

- 1. Teeth show you can see teeth without doubt. The sight of but one part of one tooth is sufficient, but you must be certain that you see a tooth.
- 2. Space between lips must be at least 2 millimeters (the thickness of 2 quarters, an American coin) between the lips.

When the jaw is lowered, use the intensity score of B to indicate that lip uniting actions are reducing the lip separation at least *slightly* from what they would otherwise be, given the extent of jaw lowering.

#### **AU 25C**

If the teeth remain together, i.e., no jaw drop can be detected, the increased lip separation from the criteria for 25B likely comes from another lip separating action or actions and must be a *marked* or *pronounced* departure from the B criteria. For example, you might score a 25C if there is a moderate action of AU 10 or AU 16 (or other lip parting action) or a small action of both 10 and 16 that parts the lips at least *markedly* more than the criteria for 25B, but less evidence than the criteria for 25D.

If the jaw is lowered by AU 26 or 27 to separate the lips, and the separation is not increased more than a *trace* by other lip separating actions or decreased more than a *trace* by lip constricting actions, score 25C. The intensity score of C for AU 25 represents the lip separation controlled virtually entirely by the jaw lowering, the lips otherwise remaining relaxed or minimally affected by other muscles pulling them open or constricting them, regardless of the absolute distance between the lips. Use the relative position of the upper lip to the upper teeth and the lower lip to the lower teeth as a guide to whether the lip separation is more or less than the jaw lowering alone produces. If other muscles act to constrict the lips, consider scoring B or A; if they act to separate the lips, consider scoring D or E.

#### **AU 25D**

When there is no jaw lowering and the lips part due to other lip separating actions, the lip separation must be *severely* greater than the criteria for 25B to assign a D intensity code to AU 25. Thus, when the teeth are together, lip parting actions other than jaw lowering, such as AU 10 and/or 16, must be pulling the lips apart at least *severely* beyond the B criteria, but less evidence than the criteria for 25E.

When the jaw is lowered, assign a D intensity score to AU 25 when these same lip lowering and raising actions are separating the lips at least *slightly* more than they would be from the jaw lowering alone, but not more than the criteria for the E intensity score. A *slight* departure from the opening caused by the jaw lowering might result from a lip lowering action, a lip raising action, or both.

### **AU 25E**

Like the other intensities of AU 25, the E intensity is not intended to reflect the absolute maximum possible separation of the lips, but rather the maximum possible separation given the degree of jaw lowering, if any. When the teeth remain together, score an E intensity when lip parting actions, such as AUs 10 and 16, separate the lips at least *extremely* or near *maximum* by both lowering the lower lip and raising the upper lip, so that the lips are separated about as much as possible.

When the jaw is lowered, assign the E intensity when both the upper lip is raised and the lower lip is lowered so that the lips are separated at least *severely* more parted than what would result from the lowered jaw alone. Thus, for example, if AU 10 and AU 16 were both acting at *maximum* so that you think the lips are separated as much as possible given the jaw lowering, you assign an E intensity code to 25.