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Crossover Procedure for Processor Quality Control Testing

To ensure that the sensitometry and densitometry testing of the processor continues to be valid when a new box of test film needs to be used, a procedure for the crossover follows.

Control Film Crossover

Control film crossover and establishment of new operating levels should not be used:
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| <ul style="list-style-type: none">• To correct problems in the processing system;• When replacing chemistry (same brand /type);• When cleaning of processor as part of routine preventative maintenance. |
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Radiographic film is produced in batches. Consequently, there may be slight variations in the characteristics of film between batches. In addition, film aging and storage conditions can affect the sensitometric characteristics of the film. Whenever a new box of film (a different lot/emulsion number) is opened for Quality Control purposes it is necessary to perform a “crossover” with the old film.

Test Procedure steps:

The crossover should be carried out only with a processor with seasoned chemistry that is operating within the 0.10 control limits.

1. While there are at least five sheets of the old QC film remaining, select a new box of film for the processor QC. (Note the emulsion number/lot of the new box of film on the remarks section of the control chart.)
2. Assure that the processor is in control as described above.
3. At the same time of the day that the processor QC is normally performed, expose and immediately process 5 sensitometric films each from the old and new boxes of film (the data calculations may be done at a later time if necessary).
4. Determine the new average of the steps identified for processor QC for MD (Mid-density); DD (Density Difference); and B+F (base + fog); (from 5 films from the old box and from the 5 films from the new box.)
5. Determine the difference in the average values between the new and old boxes of film. See example crossover worksheet.

6. Adjust the old operating levels for MD, DD, and B+F by this difference to establish the new operating levels. This is accomplished if the difference (new – old) is a positive; the new operating level is increased. If the difference (New-old) is a negative, the new operating level is decreased.
7. Record the new operating levels and their new control limits on a new control chart.
8. Note the date the crossover was performed in the remarks section of the processing quality control chart.