

Case Study of 2424A in one of the Reputed Duplex Board Plant located Near Mumbai, India.

Plant Run of “CON-TROL” 2424A manufactured by Richards Pharma Lab Ltd. Nagpur.

Plant run started at 12:00 PM on 13/08/2009 with Chemical CON-TROL 2424 A for improvement of stiffness of Board at dose 2.5kg/T. Dosing point is TOP layer, UNDER layer, MIDDLE layer and Bottom Layer CHEST. And then dose reduces to 2kg/T at 8:00AM on 14/08/2009. Chemical stopped from 6:50AM to 11:00AM on 15/08/2009 and then again started at 11:00AM and Trial continued up to 16/08/2009 till it exhaust.

FURNISH:

(SC/WB)

- i) TOP LAYER - 60% C.S.W.S.
- 40% R/Cutting
- ii) UNDER LAYER - 100% O.N.P.
- iii) BOTTOM LAYER- 100% O.N.P.

ECO-BOARD

- i) TOP LAYER - 60% R/Cutting
- 40% Soft White
- ii) UNDER LAYER - 100% White Record
- iii) BOTTOM LAYER- 60% O.N.P.
- 20% Duplex
- 20% Colour Record

QUALITY:

I) SC/WB

M/C Speed - 135m/Min
M/C Draw - 7.4T/Hr.

II) ECO-BOARD

PRODUCTION:

Total Production - 505 Ton (From 13/08/2009 at 12:00PM to 16/08/2009 at 11:00AM)
Avg Dose of CON-TROL 2424A - 1.9kg/T of Board.

PERFORMANCE OF CON-TROL 2424A :

- 1. STIFFNESS - Improvement 10-15% (When CON-TROL 2424A stopped at 6:50AM to 11:00AM on 15/08/2009 Stiffness dropped up to 20-25%)
- 2. PLY-BONDING - Improvement 10-15%
- 3. F.P.R. - Improvement 2 – 4%

So, Plant Trial of CON-TROL 2424A is a Success.

RESULTS OF CON-TROL 2424A AT REPUTED DUPLEX BOARD MILL

DATE OF TRIAL : 13/08/2009 to 16/08/2009

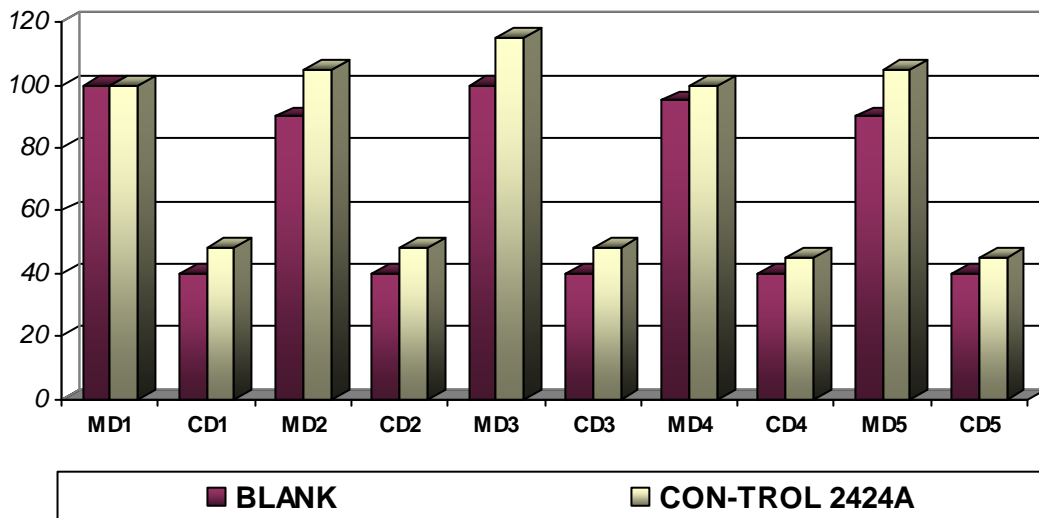
		BLANK			WITH CON-TROL-2424A			IMPROVEMENT %			
QUALITY	GSM	STIFFNESS MD/CD	PLY BOND	FPR%	STIFFNESS MD/CD	PLY BOND	FPR%	STIFFNESS		PLY BOND	FPR%
								MD	CD		
ECO-BOND	295	80/35	60-70	74%	-	-	-	-	-	-	-
		80/35									
		80/35									
ECO-BOND	300	100/40	60-70	74%	100/48	70-80	76%	10.5%	17%	15%	2.7%
		90/40			105/48						
		100/40			115/48						
		95/40			100/45						
		90/40			105/45						
ECO-BOND	320	115/50	60-70	75%	130/55	70-80	76%	15%	6%	15%	1.4%
		120/55			130/55						
		115/55			130/55						
		105/50			135/55						
		115/50			130/55						
ECO-BOND	350	145/62	55-65	76%	167/62	65-75	79%	11%	3%	16%	3.9%
		155/60			167/62						
		145/60			165/62						
		155/60			167/55						
		150/60			167/55						
ECO-BOND	400	230/110	55-65	77%	240/110	65-75	79%	6%	3%	16%	2.6%
		220/100			240/110						
		220/110			230/110						
		230/110			240/110						
		210/100			235/110						
		225/105			230/110						
		220/115			230/110						

A CONSIDERABLE AMOUNT OF IMPROVEMENT IS SEEN IN STIFFNESS (MD/CD), PLY-BONDING & FPR% WITH THE USE OF CON-TROL-2424A

RESULTS OF CON-TROL 2424A AT REPUTED DUPLEX BOARD MILL

GSM - 300
 QUALITY – ECO-BOND

STUDY	GSM	BLANK (MD/CD)	WITH CON-TROL- 2424 A (MD/CD)	AVG IMPROVEMENT IN STIFFNESS	
				MD	CD
1	300	100/40	100/48	10.5%	17%
2	300	90/40	105/48		
3	300	100/40	115/48		
4	300	95/40	100/45		
5	300	90/40	105/45		



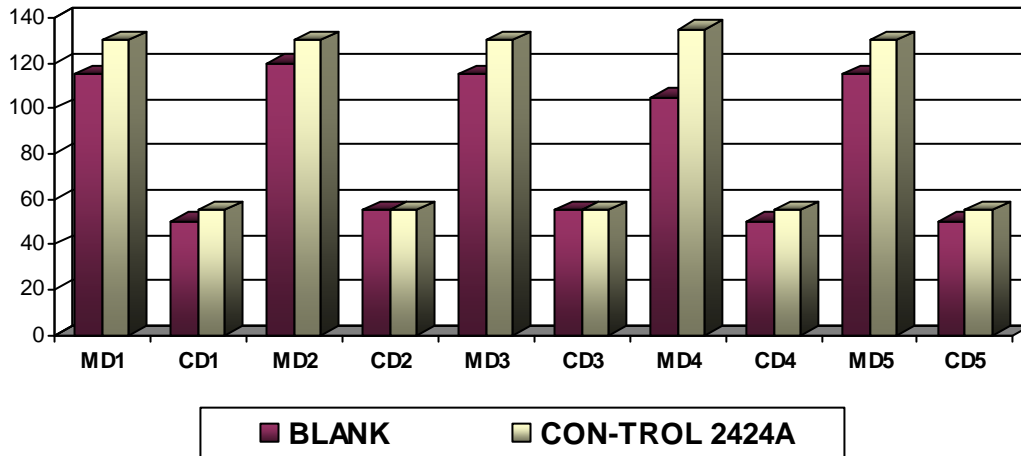
Note: MD1, CD1 shows first study values of MD/CD. Similarly MD2, CD2 shows second study values of MD/CD.

RESULTS OF CON-TROL 2424A AT REPUTED DUPLEX BOARD MILL

GSM - 320

QUALITY – ECO-BOND

STUDY	GSM	BLANK (MD/CD)	WITH CON-TROL- 2424 A (MD/CD)	AVG IMPROVEMENT IN STIFFNESS	
				MD	CD
1	320	115/50	130/55	15%	16%
2	320	120/55	130/55		
3	320	115/55	130/55		
4	320	105/50	135/55		
5	320	115/50	130/55		



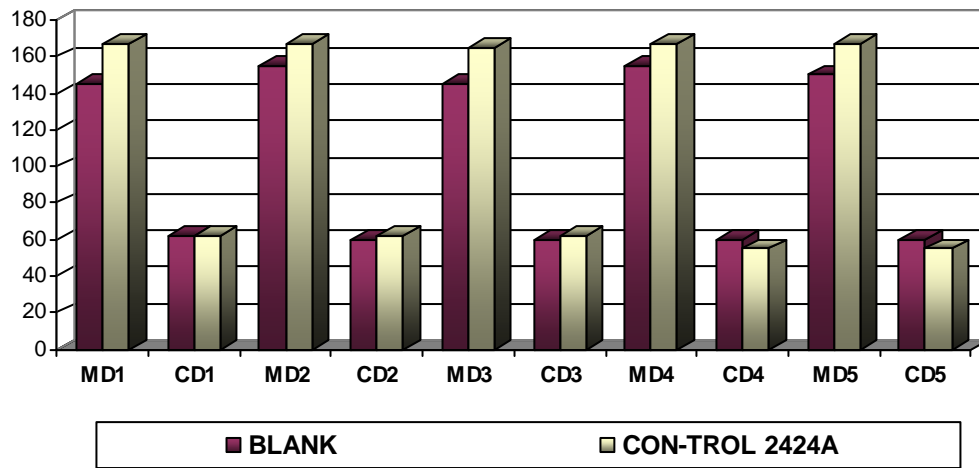
Note: MD1, CD1 shows first study values of MD/CD. Similarly MD2, CD2 shows second study values of MD/CD.

RESULTS OF CON-TROL 2424A AT REPUTED DUPLEX BOARD MILL

GSM - 350

QUALITY – ECO-BOND

STUDY	GSM	BLANK (MD/CD)	WITH CON- TROL-2424 A (MD/CD)	AVG IMPROVEMENT IN STIFFNESS	
				MD	CD
1	350	145/62	167/62	11%	3%
2	350	155/60	167/62		
3	350	145/60	165/62		
4	350	155/60	167/55		
5	350	150/60	167/55		

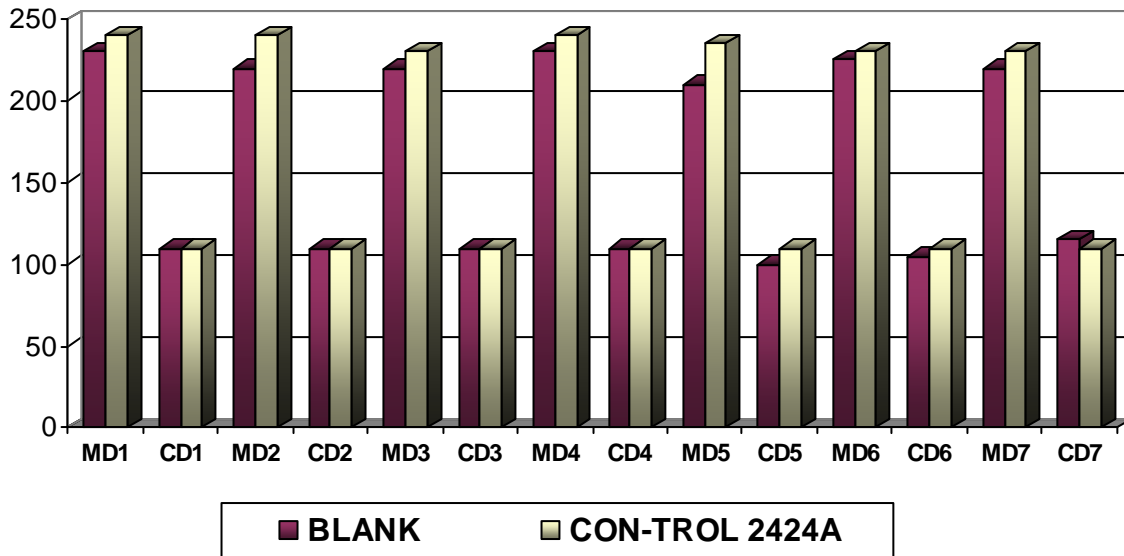


Note: MD1, CD1 shows first study values of MD/CD. Similarly MD2, CD2 shows second study values of MD/CD.

RESULTS OF CON-TROL 2424A AT REPUTED DUPLEX BOARD MILL

GSM - 400
 QUALITY – ECO-BOND

STUDY	GSM	BLANK (MD/CD)	WITH CON- TROL-2424 A (MD/CD)	AVG IMPROVEMENT IN STIFFNESS	
				MD	CD
1	400	230/110	240/110	6%	3%
2	400	220/100	240/110		
3	400	220/110	230/110		
4	400	230/110	240/110		
5	400	210/100	235/110		
6	400	225/105	230/110		
7	400	220/115	230/110		

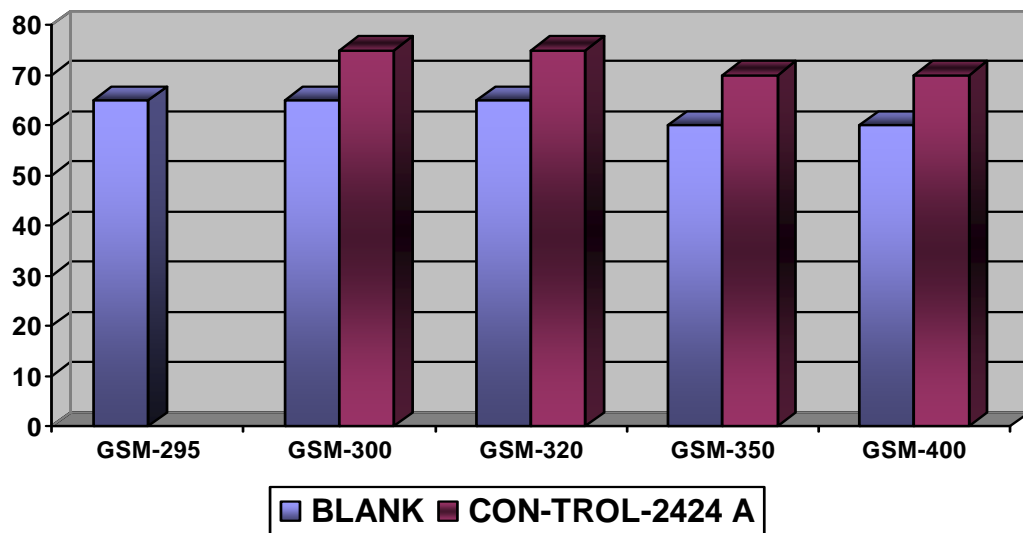


Note: MD1, CD1 shows first study values of MD/CD. Similarly MD2, CD2 shows second study values of MD/CD.

RESULTS OF CON-TROL 2424A AT REPUTED DUPLEX BOARD MILL

PLY-BOND RESULTS

STUDY	QUALITY	GSM	BLANK	WITH CON-TROL 2424 A	IMPROVEMENT
1	ECO-BOND	295	60-70	-	-
2	ECO-BOND	300	60-70	70-80	15%
3	ECO-BOND	320	60-70	70-80	15%
4	ECO-BOND	350	55-65	65-75	16%
5	ECO-BOND	400	55-65	65-75	16%

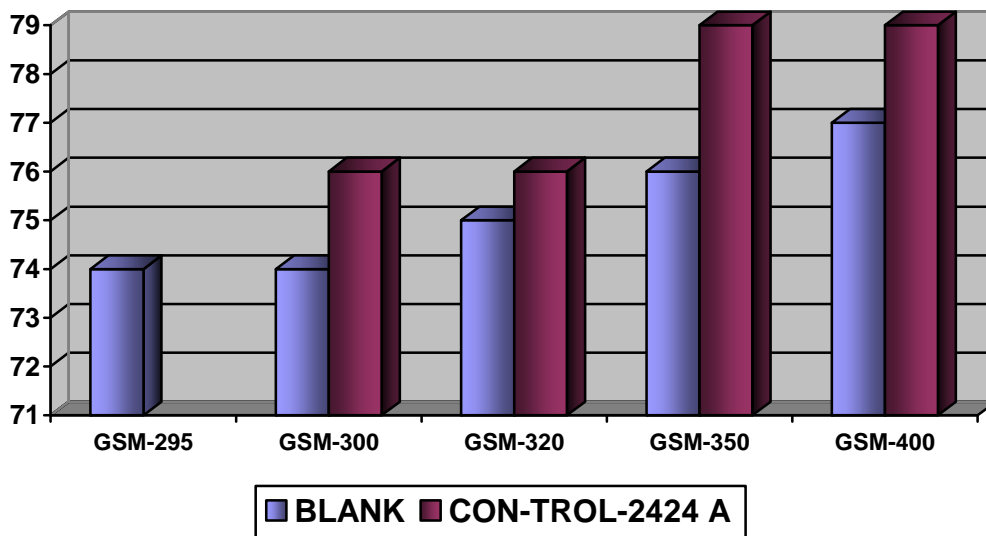


PLY-BOND RESULTS FOR ECO-BOND

RESULTS OF CON-TROL 2424A AT REPUTED DUPLEX BOARD MILL

FPR(%) TOP LAYER RESULTS

STUDY	QUALITY	GSM	BLANK	WITH CON-TROL-2424 A	IMPROVEMENT
1	ECO-BOND	295	74%	-	-
2	ECO-BOND	300	74%	76%	2.7%
3	ECO-BOND	320	75%	76%	1.4%
4	ECO-BOND	350	76%	79%	3.9%
5	ECO-BOND	400	77%	79%	2.6%



FPR(%) RESULTS FOR ECO-BOND

RESULTS OF CON-TROL 2424A AT REPUTED DUPLEX BOARD MILL

		BLANK			WITH CON-TROL-2424A			IMPROVEMENT %			
QUALITY	GSM	STIFFNESS S MD/CD	PLY BOND	FPR%	STIFFNESS MD/CD	PLY BOND	FPR %	STIFFNESS		PLY BOND	FPR %
								MD	CD		
SC/B	295	90/40	60-70	74%	95/40	70-80	76%	12%	4%	15%	2.7%
		90/40			95/45						
		85/40			90/40						
SC/B	300	80/35	60-70	74%	-	-	-	-	-	-	
		80/35			-						
		80/35			-						
		85/40			-						
SC/B	320	105/45	60-70	75%	115/45	70-80	77%	13%	13%	15%	2.7%
		105/45			115/45						
		115/45			130/55						
		110/45			130/55						
		115/45			130/55						
SC/B	350	145/62	55-65	76%	170/75	65-70	78%	9%	17%	13%	2.6%
		155/67			170/75						
		160/65			160/75						
		155/62			170/75						
		-			170/75						
SC/B	400	210/100	60-70	77%	230/100	70-80	79%	10%	3%	15%	2.6%
		205/100			230/110						
		210/110			240/110						
		205/100			230/110						
		210/100			220/100						
		210/100			230/100						
		210/100			230/100						
		210/100			225/100						

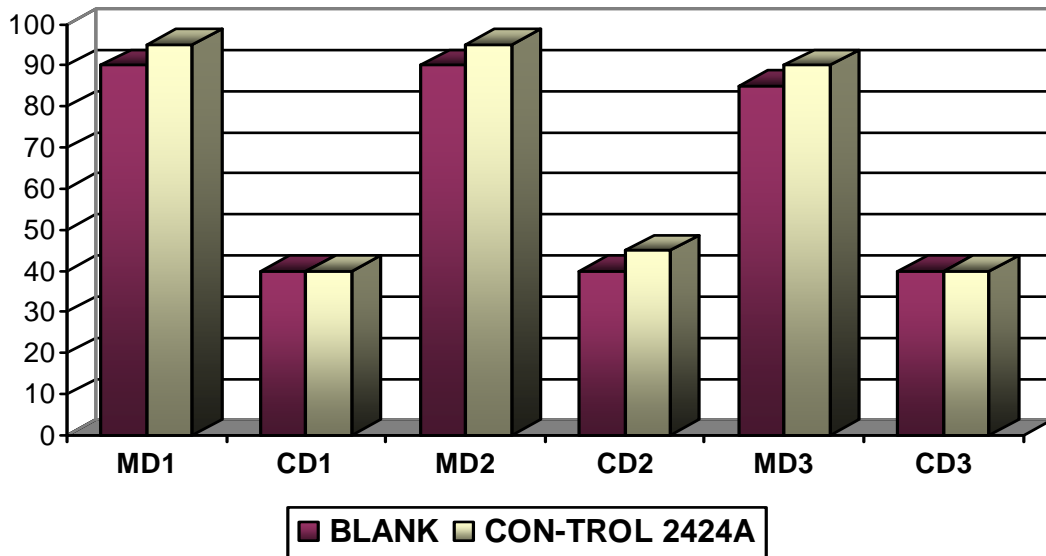
A CONSIDERABLE AMOUNT OF IMPROVEMENT IS SEEN IN STIFFNESS(MD/CD), PLY-BONDING & FPR% WITH THE USE OF CON-TROL-2424A

RESULTS OF CON-TROL 2424A AT REPUTED DUPLEX BOARD MILL

GSM - 295

QUALITY – SC/B

STUDY	GSM	BLANK (MD/CD)	WITH CON-TROL- 2424 A (MD/CD)	AVG IMPROVEMENT IN STIFFNESS	
				MD	CD
1	295	90/40	95/40	12%	4%
2	295	90/40	95/45		
3	295	85/40	90/40		



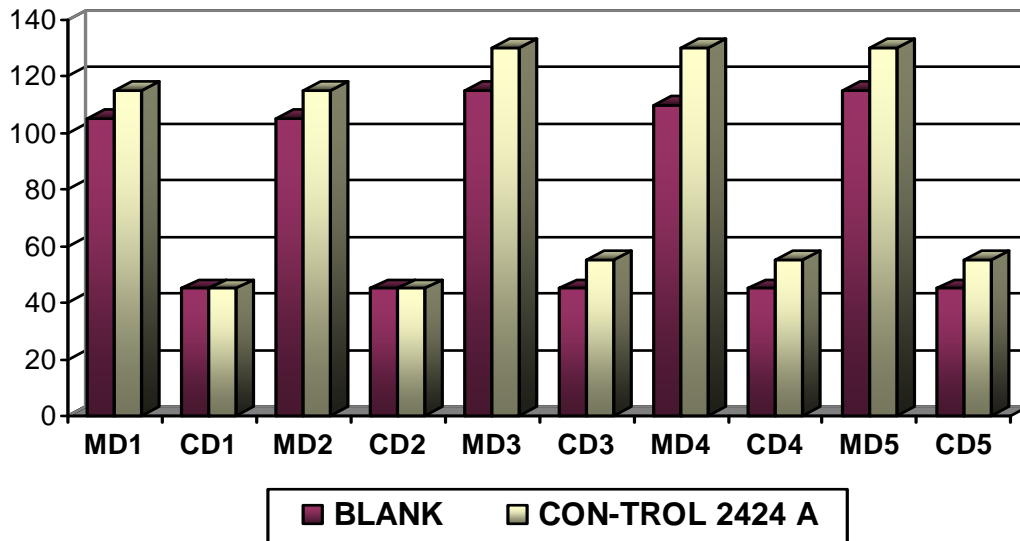
Note: MD1, CD1 shows first study values of MD/CD. Similarly MD2, CD2 shows second study values of MD/CD.

RESULTS OF CON-TROL 2424A AT REPUTED DUPLEX BOARD MILL

GSM - 320

QUALITY – SC/B

STUDY	GSM	BLANK (MD/CD)	WITH CON-TROL- 2424 A (MD/CD)	AVG IMPROVEMENT IN STIFFNESS	
				MD	CD
1	320	105/45	115/45	13%	13%
2	320	105/45	115/45		
3	320	115/45	130/55		
4	320	110/45	130/55		
5	320	115/45	130/55		



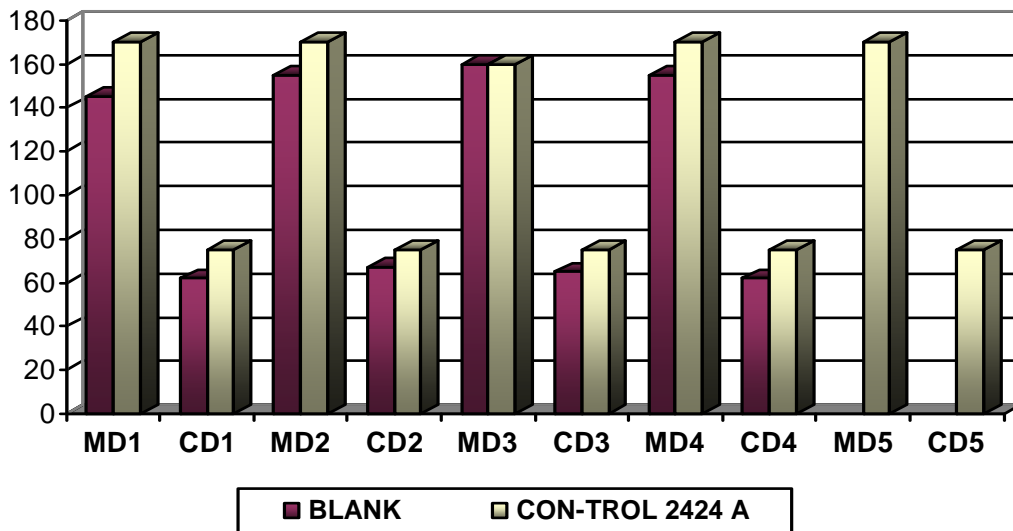
Note: MD1, CD1 shows first study values of MD/CD. Similarly MD2, CD2 shows second study values of MD/CD.

RESULTS OF CON-TROL 2424A AT REPUTED DUPLEX BOARD MILL

GSM - 350

QUALITY – SC/B

STUDY	GSM	BLANK (MD/CD)	WITH CON-TROL 2424 A (MD/CD)	AVG IMPROVEMENT IN STIFFNESS	
				MD	CD
1	350	145/62	170/75	9%	17%
2	350	155/67	170/75		
3	350	160/65	160/75		
4	350	155/62	170/75		
5	350	-	170/75		

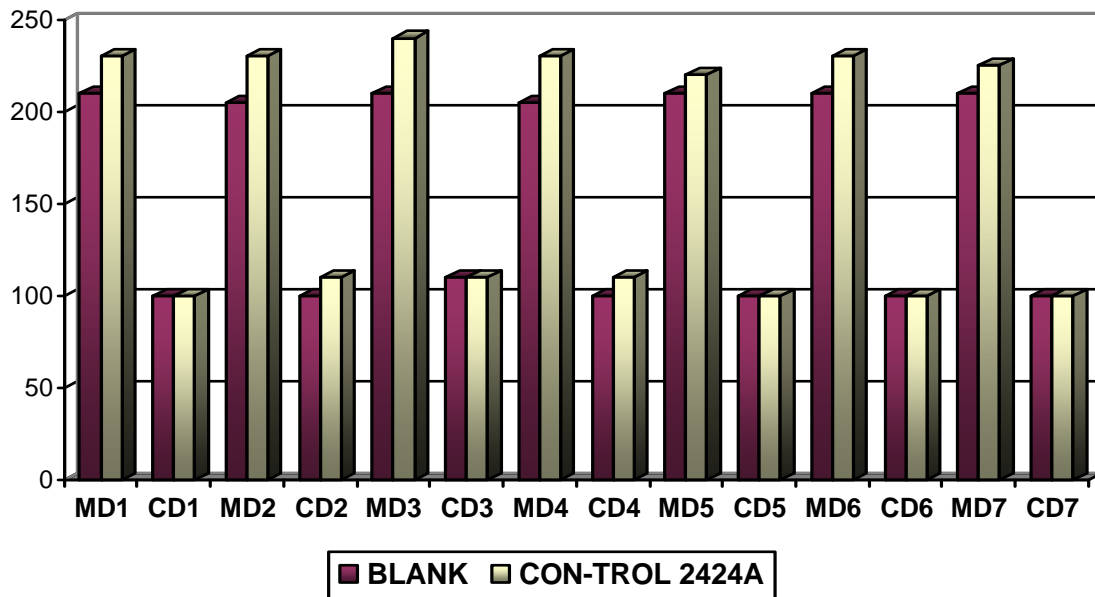


Note: MD1, CD1 shows first study values of MD/CD. Similarly MD2, CD2 shows second study values of MD/CD.

RESULTS OF CON-TROL 2424A AT REPUTED DUPLEX BOARD MILL

GSM - 400
 QUALITY – SC/B

STUDY	GSM	BLANK (MD/CD)	WITH CON-TROL- 2424 A (MD/CD)	AVG IMPROVEMENT IN STIFFNESS	
				MD	CD
1	400	210/100	230/100	10%	3%
2	400	205/100	230/110		
3	400	210/110	240/110		
4	400	205/100	230/110		
5	400	210/100	220/100		
6	400	210/100	230/100		
7	400	210/100	225/100		

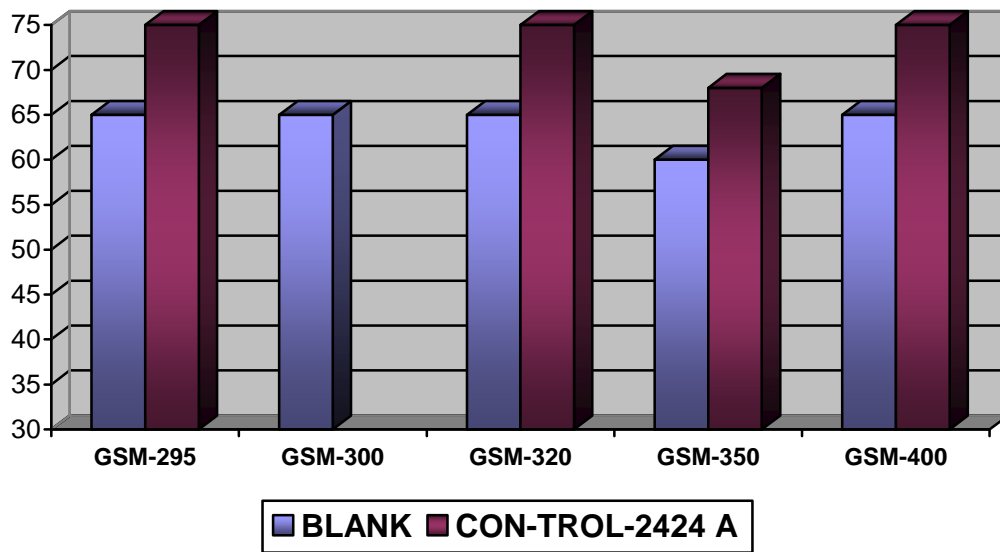


Note: MD1, CD1 shows first study values of MD/CD. Similarly MD2, CD2 shows second study values of MD/CD.

RESULTS OF CON-TROL 2424A AT REPUTED DUPLEX BOARD MILL

PLY-BOND RESULTS

STUDY	QUALITY	GSM	BLANK	WITH CON-TROL 2424 A	IMPROVEMENT
1	SC/B	295	60-70	70-80	15%
2	SC/B	300	60-70	-	-
3	SC/B	320	60-70	70-80	15%
4	SC/B	350	55-65	65-70	13%
5	SC/B	400	60-70	70-80	15%

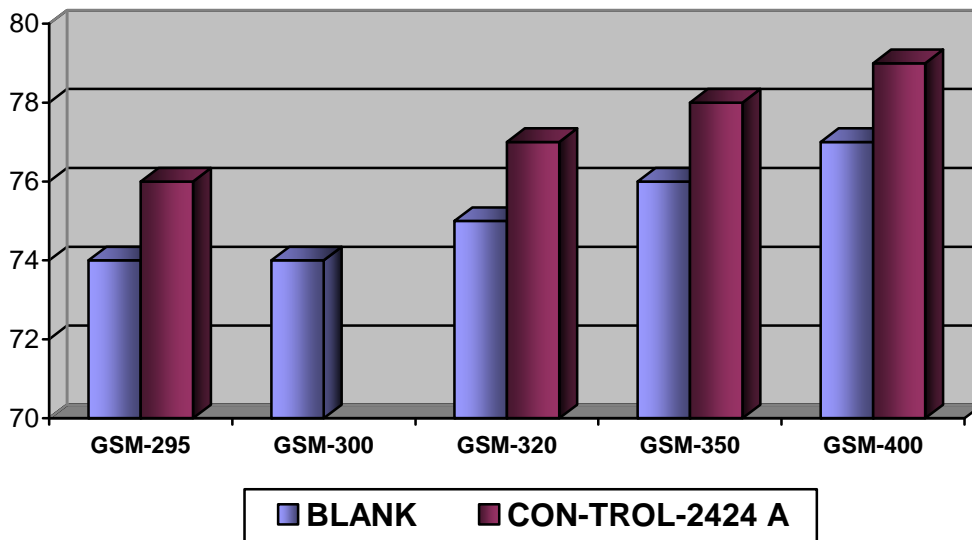


PLY-BOND RESULTS FOR SC/B

RESULTS OF CON-TROL 2424A AT REPUTED DUPLEX BOARD MILL

FPR(%) TOP LAYER RESULTS

STUDY	QUALITY	GSM	BLANK	WITH CON-TROL 2424 A	IMPROVEMENT
1	SC/B	295	74%	76%	2.7%
2	SC/B	300	74%	-	-
3	SC/B	320	75%	77%	2.7%
4	SC/B	350	76%	78%	2.6%
5	SC/B	400	77%	79%	2.6%



FPR(%) RESULTS FOR SC/B